

COUNTRY
GROWTH&JOBS
REPORT 2025

Mauritania

Beyond Extractives: Unlocking
Mauritania's Potential for
a Sustained, Inclusive and
Resilient Growth

COUNTRY GROWTH&JOBS REPORT 2025

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ACRONYMS

ANSADE	Agence Nationale de la Statistique et de la Démographie
BOS	Business Operating System
CAPEX	Capital Expenditure
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HDI	Human Development Index
ICT	Information and Communication Technology
LPI	Logistics Performance Index
MW	Megawatt
OPEX	Operational Expenditure
REER	Real Effective Exchange Rate
ToT	Terms of Trade
TWh	Terawatt-hour
UMIC	Upper Middle-Income Country
WDI	World Development Indicators
WIPO	World Intellectual Property Organization

ABSTRACT

Mauritania's extractive-led development path has run its course. Despite a fast-growing young workforce and untapped potential among women, the benefits of resource-driven development have largely bypassed the majority of the population, with only a small fraction able to access productive jobs that deliver sustainable livelihoods, beyond mining and related industries. Mauritania must address four persistent challenges to realize its development ambitions and embark on a path of higher growth and job creation: First, weak labor demand in productive sectors and low labor force participation, especially among women and youth; second Weak productivity growth, constraining labor earnings and economic diversification; third Limited investment in non-extractive sectors, resulting in insufficient private sector development fourth High growth and revenue volatility, exacerbated by climate risks and commodity dependence. These challenges are rooted in i) weak foundational infrastructure (including human capital and digital), ii) poor regulatory quality and excessive state footprint affecting competition, access to land, fiscal policy, and labor market dynamics, and iii) limited private sector dynamism, beyond traditional extractive industries.

A comprehensive and actionable set of reforms can unlock job creation and deliver a diversified, resilient, and inclusive growth path to reach Upper Middle-Income Country (UMIC) status by 2050. These are centered on three main pillars: (i) building a robust foundation of physical, human, and natural capital; (ii) creating a predictable regulatory environment; and (iii) fostering a dynamic private sector, that will foster stronger and better job creation by the non-extractive sectors, such as energy, agribusiness, and tourism (Table O.1). Strengthening Mauritania's foundational infrastructure requires modernizing payment systems, scaling-up investment in early childhood education, boosting women's workforce participation, and expanding fiscal resources for climate adaptation and mitigation investments. Also, reforms such as establishing and operationalizing an independent anti-corruption agency, revising the 2004 Labor Code to simplify hiring and eliminate gender bias, implementing an electronic land management system, and enforcing the new competition law will help create a stable regulatory environment that supports business and job growth. To support a dynamic private sector, policies should focus on better access to finance, smoother technology transfer, and innovation-friendly environments. This includes investing in STEM, creating efficient credit bureaus and registries, and developing demand-driven skills training systems (TVET).

By assessing reforms according to their feasibility, their capacity to catalyze additional changes, and their projected effects on growth and employment, five key policy priorities have been identified: (i) increasing investment in early childhood education to build a skilled workforce, (ii) mandate the electronic processing of all land transactions and incentivize land titling, (iii) update the labor code, (iv) operationalize the competition authority and (v) scale-up investment in STEM and support technology adoption. A phased approach should begin with immediate transparency measures like electronic land transactions, followed by medium-term legislative and educational reforms, and culminating in long-term investments in human capital. World Bank policy simulations indicate that establishing a competition authority will most strongly boost employment, while investment in early education will have the greatest effect on GDP, wages, and productivity, collectively positioning Mauritania for sustained, diversified economic growth.

OVERVIEW: BEYOND THE EXTRACTIVES-LED GROWTH MODEL

Mauritania's rise to Lower Middle-Income Country status over the past two decades is largely attributable to its extractive industries. The nation is endowed with valuable resources—iron ore, gold, copper, and natural gas—which dominate its economic landscape, representing more than 70 percent of exports and one-fifth of GDP. Mauritania's geography ranges from semi-arid expanses to wetlands and coastal zones, adding to its economic diversity. Much of the country's wealth accumulation is linked to the discovery and extraction of non-renewable resources, notably since oil production began in 2006 and gold and iron mining expanded in the early 2010s. Globally, Mauritania ranks among the countries with the highest per capita stocks of metals and minerals, alongside Australia, Chile, Suriname, Mongolia, and Peru.

However, this growth model has run its course, and business as usual will not deliver the country's national ambition to reach Upper Middle-Income status by 2050. The volatility inherent in an extractive-driven model results in per capita income growth that lags behind peers with more stable, diverse economies (Pouokam 2022), a dynamic that seems to be at play in Mauritania.¹ The country's rapidly growing, youthful population faces a labor market where capital-intensive extractive industries provide limited employment—just 1.2 percent of total jobs—despite their significant share of GDP. To ensure sustainable livelihoods and capitalize on demographic trends, it is essential to channel revenues from extractives into labor-intensive sectors, thereby diversifying the economy and increasing productive employment opportunities.

Mauritania has yet to harness its full national economic potential to spur resilient and diversified development with a dynamic private sector, leveraging extractives. Structural constraints impede private sector-led diversification. Insufficient investment in foundational infrastructure—transport, energy, education, and health—alongside a restrictive regulatory environment and limited entrepreneurial activity beyond traditional extractive sectors, undermines private sector growth.² Frequent shocks, including those triggered by climate change factors, pervasive insecurity, and uncertainty, further challenge diversification efforts.

The Mauritania Growth and Jobs Report is designed to equip policymakers with diagnostic analysis and actionable recommendations that can advance the country's Strategy for Accelerated Growth and Shared Prosperity (SCAPP). It is structured as follows:

- Chapter 1: Reviews Mauritania's growth trajectory, identifying drivers of weak and volatile performance—such as productivity trends, business climate, and climate challenges—and explores the implications for job creation and poverty reduction.
- Chapter 2: Examines trends and determinants of firm-level productivity.

1 Resource wealth is often associated with slower GDP growth and higher macroeconomic volatility. See Pouokam (2022) for a recent review of the literature. Pouokam, N. (2022). "Sharing Resource Wealth and Addressing Fragility," in *How to Achieve Inclusive Growth*. Edited by Valerie Cerra, Barry Eichengreen, Asmaa El-Ganainy, and Martin Schindler. Oxford University Press. While Dutch Disease is a relatively common occurrence in resource-rich countries, it does not seem to be especially significant in Mauritania. While inflation did rise faster than in peer countries, the real exchange rate did appreciate marginally. In addition, manufacturing value added has not shrunk significantly relative to extractive industries value added.

2 In line with the April 2025 Development Committee paper "Jobs: The Path to Prosperity," foundational infrastructure encompasses healthcare, education, skills training, clean air and water, transportation, and energy systems, while ensuring consistent terminology across the report.

- Chapter 3: Presents policy options for fostering an investment-friendly environment and for advancing the digital economy, both critical to diversification.
- Chapter 4: Assesses strategies to sustain growth and support private sector development in the context of climate risks and the green transition, emphasizing the role of carbon tax revenues and fossil fuel reform in climate adaptation and mitigation.
- Chapter 5: Proposes a framework for growth and jobs based on the World Bank Group's Strategic Framework for Private Sector Development and Job Creation,³ offering estimates of the potential impacts of recommended reforms.
- Across all chapters, the analysis addresses how gender disparities constrain growth and identifies policies to address these gaps.

Growth Challenges in Mauritania's Extractives-Led Economy

Mauritania's economic growth over the past two decades has fallen short of its national ambitions.

Mauritania's economic performance has lagged behind aspirational peers such as Morocco, Algeria, Côte d'Ivoire, and Vietnam. With an average annual growth rate of 3.5 percent—well below the SCAPP target of 7.5 percent and the peer average of 4.2 percent—the country has struggled to achieve sustained, inclusive growth. This shortfall is compounded by significant fluctuations, reflecting the economy's heavy exposure to extractives and external shocks.

Mauritania must address four persistent challenges to realize its development ambitions and embark on a path of higher growth and job creation:

- Weak labor demand in productive sectors and low labor force participation, especially among women and youth.
- Weak productivity growth, constraining labor earnings and economic diversification.
- Limited investment in non-extractive sectors, resulting in insufficient private sector development.
- High growth and revenue volatility, exacerbated by climate risks and commodity dependence.

Weak Labor Demand in Productive Sectors and Low Labor Force Participation

Persistent poverty and uneven progress in poverty reduction highlight the ongoing challenges Mauritania faces in achieving inclusive economic growth. Over 30 percent of the population remains poor, with poverty estimated to have increased from 31.8 percent in 2019 to 34.3 percent in 2023, following the pandemic and inflationary pressures. Economic growth has contributed to poverty reduction, but progress has been uneven across regions. Growth accounted for 60 percent of nationwide gains between 2014 and 2019. Urban poverty reduction is driven largely by growth, whereas redistribution plays a more significant role in rural areas. Income gaps with peer countries are widening, and human development indicators remain stagnant (Figure O.1.a & Figure O.1.b).

Labor market participation is particularly weak: only 42 percent of the working-age population is economically active, with notable gender disparities—27 percent of women compared to 58 percent of men. Multiple factors contribute to low female participation, including limited job opportunities, cultural norms, gender-discriminatory legal provisions in the Labor Code, and disproportionate exposure to lower paid, unpaid and informal work. Climate shocks further exacerbate these disparities.

Structural transformation has been slow, and most job creation has occurred in low-productivity informal services rather than high-value-added sectors. Wage employment remains limited, and self-employment

3 World Bank. (2025). Jobs: The Path to Prosperity. https://www.devcommittee.org/content/dam/sites/devcommittee/doc/documents/2025/Final_DC2025-0002.pdf

Figure O.1.a: The Income gap between Mauritania and peers is widening

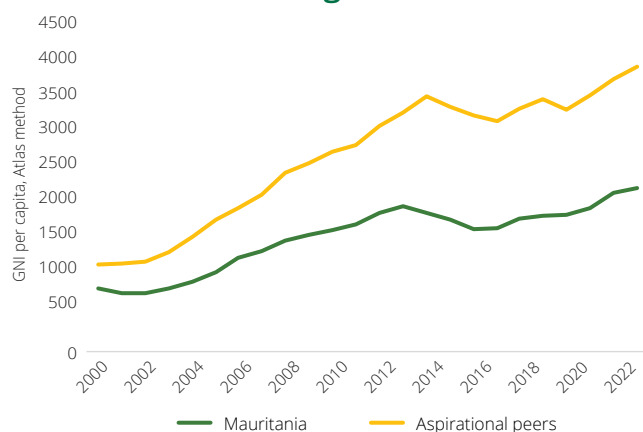
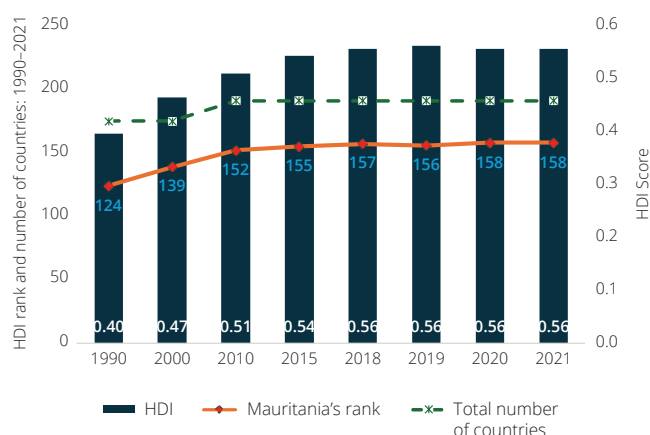


Figure O.1.b: ... and gains across Human Development Indicators have been slow



Source: Staff's calculations based on WDI data, ANSADE and HDI reports.

Figure O.2.a: Mauritania is lagging peers in terms of employment (2022)

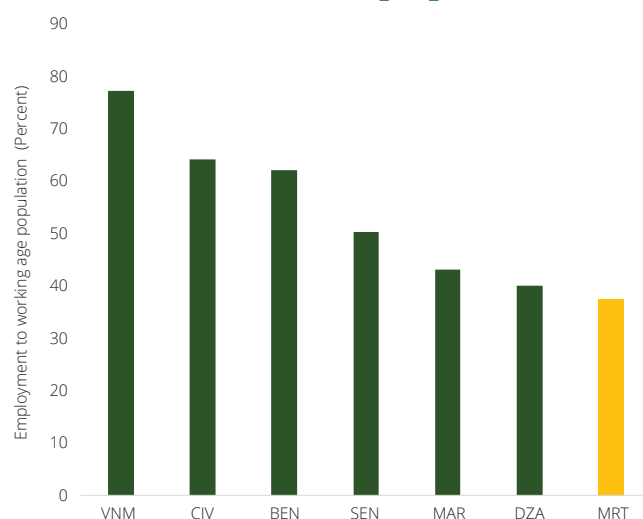
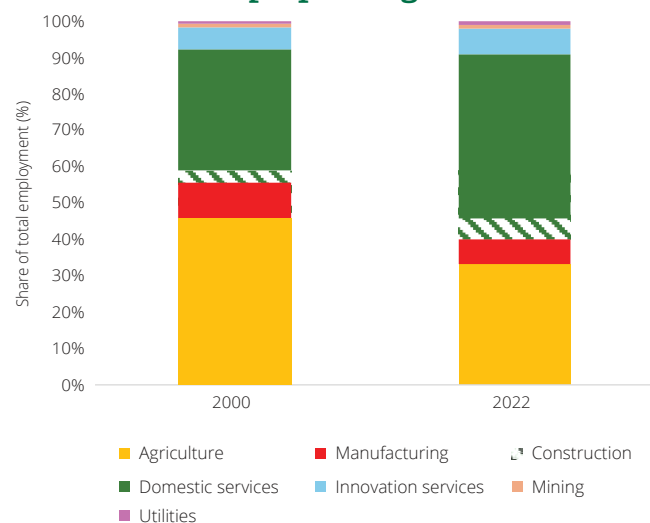


Figure O.2.b: Domestic services contributed the most to employment growth



Source: World Bank Structural Change and Employment Dataset, ILOSTAT and World Bank Staff calculations.

predominates, reflecting the movement of labor from agriculture and to some extent industry to low-wage urban services, as opposed to tradable and innovative services—e.g. digital, IT, financial, logistics services—associated with higher productivity. This is illustrated by Mauritania share of employment in working age population lagging its peers (Figure O.2.a). Furthermore, the quality of jobs generated has been relatively low, as reflected by lower wage employment compared to peer countries.

A comprehensive approach is required to boost both job creation and participation, especially for women and youth. Key actions include interventions in the demand and supply side of the labor market:

- Improving productivity in the informal sector through targeted skills development and entrepreneurship support.
- Aligning education and training systems with labor market needs, focusing on early childhood development, foundational learning and technical/vocational education responsive to economic diversification needs.

- Removing rigidities in labor markets, modernizing labor regulations, and investing in infrastructure and digital technology.
- Implementing pro-growth regulatory and governance reforms to stimulate private sector dynamism.
- Dedicated measures to reduce gender gaps and increase female labor force participation.

Weak Productivity Growth

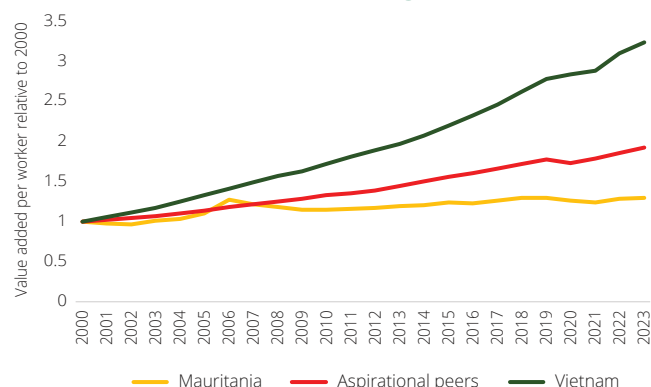
Labor productivity has been growing slowly, generating low earnings. Aggregate labor productivity has increased by only 26 percent over 22 years—far below peer aspirational economies (Figure O.3), such as Vietnam, which experienced a 140 percent gain. Most productivity improvements have been sector-specific (as opposed to movements between sectors) particularly during the commodity super-cycle (2005–2014), with limited spillovers to non-extractive sectors. Industry—and mining and utilities in particular—have seen declining productivity, while services have grown, albeit primarily in low-value segments.

Firm-level productivity is constrained by the combination of multiple factors: (i) Slow expansion and limited dynamism among formal firms; (ii) Pervasive market informality and misallocation of labor; (iii) High market concentration and weak competition; (iv) Low rates of technology adoption and innovation. Formal businesses expand at a modest pace, and market concentration stifles competitiveness. The dominance of state-owned enterprises and widespread informality further impede growth. Over 90 percent of Mauritania's workforce is in the informal sector, resulting in few formal businesses and significant obstacles to formalization (Figure O.4). Formal firms grow slowly: those aged 10–14 years are only 52 percent larger than those aged 1–4 years, much less than in dynamic economies like Vietnam. Productivity among formal firms has stagnated due to limited investment in efficiency upgrades, high market concentration, and a dominant state presence that creates unfair competition. Informal firms benefit from lower costs, putting formal businesses at a disadvantage and hindering innovation and productivity.

Non-extractive Foreign Direct Investment (FDI) has been scarce and modest in scale, with only four projects approved annually between 2014 and 2023. Extractive-seeking FDI tends to be volatile, offers minimal productivity spillovers, is heavily capital-intensive, and provides limited employment opportunities for local citizens. A significant proportion of the few jobs created are occupied by foreign workers, with direct employment prospects expected to decrease once the projects become operational.

Gender disparities in entrepreneurship and economic participation present a significant barrier to Mauritania's inclusive growth. Women remain underrepresented as entrepreneurs—only 11 percent of entrepreneurs are female—and their broader economic participation is hindered by legal and practical barriers. The limited economic participation of women contributes to the low business density in the country, limiting the economy's dynamism. Only 26 percent of the female working-age population participates in the labor market. This underrepresentation indicates significant untapped potential for growth and job creation.

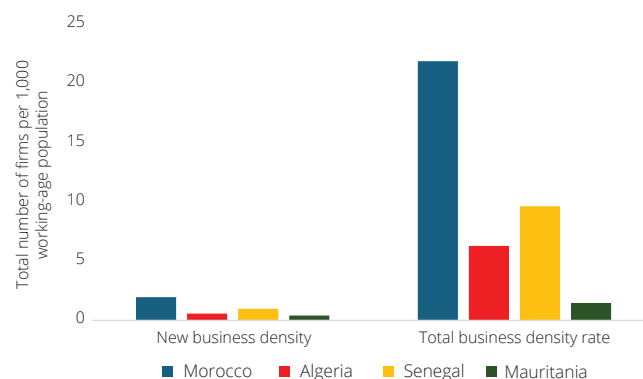
Figure O.3: Mauritania's productivity growth has been underwhelming



Source: World Bank World Development Indicators (WDI).

Note: The aspirational peer group includes Vietnam.

Figure O.4: Business density is significantly lower in Mauritania



Source: Entrepreneurship database, World Bank staff calculations.

To boost productivity, policies should focus on:

- Promoting firm upgrading, innovation, improved managerial practices and workforce skills.
- Strengthening competition policy to address market dominance by a few enterprise groups and state-owned businesses in key sectors such as construction, banking and agriculture and stimulate investment.
- Attracting stable, non-extractive Foreign Direct Investment (FDI) and supporting export diversification.
- Implementing legal reforms and addressing practical barriers to enhance women's entrepreneurship, asset ownership and access to credit.

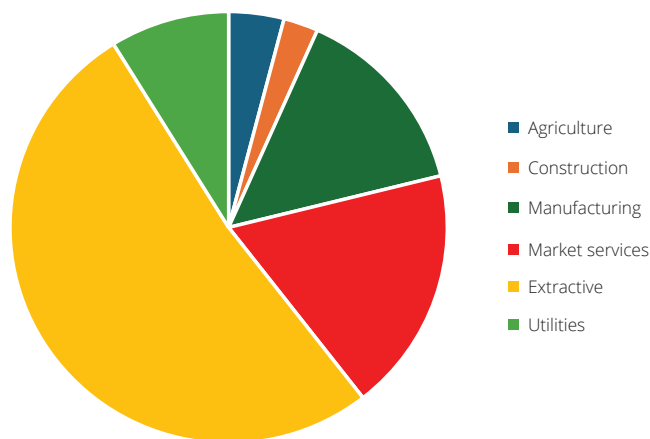
Limited Investment in Non-Extractive Sectors

Foreign investment in Mauritania is heavily concentrated in the extractive sector. Over the last decade, extractives have accounted for 52.6 percent of total FDI, with far less flows into agriculture, manufacturing, and services (Figure O.5). This sectoral imbalance highlights the underdevelopment of Mauritania's non-extractive private sector, contributing to economic volatility, limited job creation, and sluggish productivity growth. Therefore, encouraging more investment in non-extractive sectors is crucial for the country's sustainable development.

The weak state of Mauritania's private sector stems, in part, from an unfavorable business environment [See chapter 3]. Issues include inefficiencies in land administration, rigid labor market regulations, burdensome tax procedures, trade and logistics constraints, weak competition policies, and unreliable contract enforcement. Unclear land ownership titles and opaque transaction processes create uncertainty, deterring potential investors. Likewise, outdated and complex labor rules, alongside a shortage of skilled workers, impede business growth. The tax system is also seen as costly, with complicated online filing and payment methods and delayed VAT refunds discouraging formalization and investment. Trade and export diversification are hampered by slow customs procedures, port inefficiencies, and non-tariff barriers, while oligopolistic market structures and anti-competitive behavior restrict dynamism and limit technology adoption. Trust in contract enforcement is low due to protracted judicial processes and a lack of transparency, further undermining business confidence, diversification, and job creation.

Additionally, weak human capital hinders new business formation and expansion. Mauritania's Human Capital Index stands at 0.38, meaning that a child born today is expected to achieve only 38 percent of their productivity potential—well below the averages for Sub-Saharan Africa and lower-middle-income countries. This shortfall is largely due to deficiencies in the education system, with many lacking basic literacy and numeracy skills, resulting in a poorly prepared workforce. There is also a significant mismatch between the skills taught in schools and those needed in the labor market, and technical or vocational training is scarce, accounting for less than 10 percent of all post-basic enrollments. As a result, firms frequently face a shortage of qualified workers, stifling their growth and innovation capacity.

Figure O.5: Investments in the extractive sector account for half of total FDI



FDI by sector: average 2010–2022

Source: Agence de Promotion des Investissements (APIM), FDI market database and World Bank Staff calculations.

To foster diversification, Mauritania needs comprehensive reforms that enhance the business environment and attract FDI into non-extractive sectors. These include the following reforms that are all essential for supporting non-extractive economic activities.

- Broad improvements in governance and institutional quality,
- Regulatory reforms—such as more flexible labor markets, well-defined property rights, better contract enforcement, and stronger market competition.

Growth and Revenue Volatility Exacerbated by Climate Vulnerability

Mauritania's growth and revenue volatility is closely linked to its dependence on extractive industries and exposure to commodity price swings, both of which are intensified by pro-cyclical fiscal policies. While the sector contributes significantly to the economy, government revenues from extractives are relatively low—only 3.1 percent of GDP—and subject to significant fluctuations. Past approaches, such as channeling commodity windfall revenues into irreversible expenditures and inefficient investments, have proved unsustainable. The Fonds National des Ressources de l'Hydrocarbure (FNRH) stabilization fund has not accumulated substantial savings, highlighting the need for reform.

Frequent climate shocks also contribute to economic volatility. Without adaptation, climate change is projected to reduce annual GDP significantly by 2050, impacting labor, agriculture, infrastructure, and water resources (World Bank, 2022). Rising temperatures—tracking global averages—are driving land degradation and desertification, with the country experiencing more frequent droughts, floods, and extreme heat events. Since the 1950s, the average annual temperature has climbed by about 1.5°C, and there are now nearly 45 additional days each year when the Heat Index surpasses 35°C. Simultaneously, annual rainfall has fallen from approximately 85 mm in 1950 to 63 mm in 2020, and the number of consecutive dry days has increased, rising by about one day per decade from 1950–2020 and by four days per decade from 1991–2020. According to the G5-Sahel CCDR report, by 2050, climate shocks could lower Mauritania's GDP by as much as 9.3 percent compared to a scenario without climate change, with key impacts stemming from labor heat stress, crop failures, sea level rise, infrastructure damage from flooding, droughts, and intensifying water scarcity.

Climate risks also worsen gender disparities in the labor market, particularly affecting female labor force participation. In drought-affected regions,⁴ primary education completion rates have dropped 12 percentage points, particularly for rural women, further limiting their economic prospects and future participation in the workforce. Droughts have also led to rising rates of maternal mortality and early pregnancies among young women.

Mauritania's reliance on imported oil heightens vulnerability to commodity price fluctuations and hampers climate mitigation, despite the nation's comparative advantage in gas and renewable energy. The past decade's high international oil prices drove up fuel import costs and required substantial domestic energy subsidies, straining public finances and weighing on economic performance. Although Mauritania's contribution to global greenhouse gas emissions is small, emissions nearly doubled—rising from 6.9 Mt in 1990 to 12.9 Mt in 2020, largely due to methane from livestock. Transitioning to domestic energy sources, especially natural gas as highlighted in the country's energy master plan, presents an opportunity to reduce both vulnerability and emissions intensity. By leveraging offshore gas for domestic power, Mauritania aims to decrease its reliance on imported fossil fuels and support the World Bank M300 initiative's sustainability goals.

Financing climate adaptation remains challenging given Mauritania's limited fiscal space. The National Determined Contributions (NDC) lay out a US\$34.3 billion mitigation plan—mostly for renewable energy investments covering up to 80 percent of planned unconditional emission reductions (11 percent)—and US\$10.6 billion needed for adaptation in areas such as water, sanitation, and housing. If funded domestically, adaptation costs would average 123 percent of 2023 tax revenues each year. Even with efforts to increase revenues, particularly by reducing tax expenditures, a sizable financing gap persists.

Sound fiscal management can reduce volatility and pro-cyclicality in public spending, optimizing fiscal revenues over time, creating fiscal space for critical investments in physical and human capital supported by strengthened public investment management. A stronger fiscal framework should include forecasting of resource revenues, a focus on the non-extractive primary balance to gauge fiscal stance, and fiscal rules that limit revenue volatility. Optimizing intertemporal resource allocation and managing revenue uncertainty is also crucial. Policymakers should establish fiscal institutions—such as savings or sovereign wealth funds—and build precautionary savings and financial buffers, particularly to hedge against the risk of stranded fossil fuel assets. Improved revenue management will create fiscal space for investment in foundational infrastructure.

Fiscal reforms should complement this framework to expand Mauritania's fiscal space. The government's 2025 budget introduces a carbon tax while concurrent reforms aim to rationalize tax expenditures, enhance tax collection, and review fossil fuel subsidies and potentially phasing out fossil fuel subsidies. These measures could raise additional revenue, bolstering investments in climate resilience and the adoption of low-carbon technologies.

4 Such as Guerrou, Kankossa, Maghama, Ould Yenge, Selibaby, Amourj, Bassikounou, Djigueni, Nema, Oualata, Timbedra, Aioun, Kobeni, Tamchekett, Tintane, R'kiz et Rosso.

How Can Mauritania Leverage Its Endowments to Create More and Better Jobs?

Mauritania's ambitions to reach Upper Middle-Income Country (UMIC) status by 2050 require a significant shift from its current development trajectory. Based on existing policies, the country is unlikely to achieve UMIC standing within the desired timeframe, as continuing with the current extractive-led growth model would delay this milestone for nearly a century. The government's Strategy for Accelerated Growth and Shared Prosperity (SCAPP) aims to achieve strong, sustainable, and inclusive growth by 2030, targeting an average growth rate of 7.5 percent between 2022 and 2030—almost double the pace of the past two decades. Mauritania has also pledged to reach net zero emissions by 2030, dependent on external financial support, while strategically investing in adaptation to climate impacts.

A comprehensive set of policy reforms can overcome the challenges imposed by reliance on extractive industries. These are centered on three main pillars: (i) building a strong foundation of physical, human, and natural capital; (ii) creating a predictable regulatory environment; and (iii) fostering a dynamic private sector. Each pillar addresses core challenges in Mauritania's current economic model, with Table O.1 detailing the full set of proposed reforms and their alignment with these pillars.

Table O.1: Comprehensive approach for private sector development and job creation in Mauritania

Growth challenges of Mauritania's extractives-led model	Key drivers	Key policy reform areas	Corresponding pillars in the world bank group's strategic framework for private sector development and job creation
Weak labor demand in productive sectors and labor force participation, especially among women and the youth	Low female labor force participation	Scaling-up investment in early childhood education Eliminating the gender gap in secondary and tertiary education Scaling-up investment in maternal and reproductive health services for adolescent girls and young women Updating the labor code.	Building a strong infrastructure foundation of physical, human, and natural capital Creating a predictable regulatory environment
	Limited access to skilled workforce and significant skill mismatches	Establishing a Labor Market Information System (LMIS) Updating the labor code. Scaling up investment in early childhood education	Building a strong infrastructure foundation of physical, human, and natural capital Creating a predictable regulatory environment
Low productivity growth, limiting labor returns	High market concentration	Generalizing the use of E-procurement Reducing tariff and non-tariff barriers to trade to that of peers Operationalizing the newly created competition authority	Creating a predictable regulatory environment

(continues)

Table O.1: Comprehensive approach for private sector development and job creation in Mauritania (Continued)

Growth challenges of Mauritania's extractives-led model	Key drivers	Key policy reform areas	Corresponding pillars in the world bank group's strategic framework for private sector development and job creation
	Limited access to technology and limited technology adoption	Reducing tariff and non-tariff barriers to trade to that of peers Modernizing the payment system infrastructure	Creating a predictable regulatory environment Building a strong infrastructure foundation of physical, human, and natural capital
	Limited firm innovation capacities	Scaling-up investment in STEM Supporting skills development targeted at local needs	Fostering a dynamic private sector
Insufficient investment in non-extractive sectors	Limited firm-level competition and prevalence of non-tariff barriers, especially in the agricultural sector	Operationalizing the newly created the competition authority Reducing tariff and non-tariff barriers to trade to that of peers	Creating a predictable regulatory environment
	Persistent asymmetries in asset ownership and access to credit	Improving firms' access to finance. Improving secured access to land	Fostering a dynamic private sector
	Inefficiencies in enforcing court decisions and lack of transparency	Strengthening the independence and integrity of the justice system Creating and operationalizing an independent agency to fight corruption	Creating a predictable regulatory environment
	Limited access to land and poor quality of land management	Improving secured access to land.	Creating a predictable regulatory environment
	Limited access to skilled labor	Supporting skills development targeted at local needs Updating the labor code Scaling-up investment in STEM Scaling-up investment in early childhood education	Fostering a dynamic private sector (1 and 3) Building a strong infrastructure foundation of physical, human, and natural capital (2 and 4)
	Outdated and inefficient labor market regulatory framework	Updating the labor code	Creating a predictable regulatory environment
Growth volatility, worsened by climate vulnerability	Limited fiscal space to invest in adaptation	Removing fossil fuel subsidies and introducing carbon taxation to fund adaptation investments	Building a strong infrastructure foundation of physical, human, and natural capital
	Inadequate urban planning	Operationalizing the new urban law and the newly created coastal observatory	Creating a predictable regulatory environment

Building a Strong Infrastructure Foundation

Establishing strong digital, physical, and human infrastructure is essential to unlocking private sector potential and generating employment opportunities. The reforms associated with this pillar are designed to promote economic diversification beyond the extractive industries and mitigate climate vulnerability while safeguarding and enhancing Mauritania's natural capital.

Strengthening human capital, ensuring its effectiveness, and harnessing the potential of the under-utilized female labor force are essential for generating both more and better jobs. Promoting job creation requires strategic investment in early childhood education, high-quality healthcare services, and labor market interventions. Enhancing the effective deployment of human capital involves developing targeted programs for women and youth, as well as establishing an efficient Labor Market Information System (LMIS). Additionally, increasing female labor force participation can be supported through incentives designed to facilitate women's employment. Over the medium term, reforms should focus on building a robust lifelong learning framework in collaboration with the private sector and expanding apprenticeship initiatives.

Expanding domestic energy generation, and renewable energy in particular, can be a critical driver of private sector development and economic diversification in Mauritania. The country's vast energy generation potential, including natural gas and renewable energy such as hydropower, solar and wind, presents significant opportunities for generating reliable energy, essential for powering industries, lowering costs and attracting private investments. The government intends to increase the share of renewables in the national energy mix from 44 percent in 2023 to 70 percent by 2030, with a focus on rural areas where access to electricity is as low as 6 percent. The development of renewable energy can support the transition to a low-carbon economy, making Mauritania a potential hub for renewable energy trade, gas as a transition fuel and green hydrogen production. The integration of low-carbon technologies into the generation mix offers significant potential for job creation, including direct jobs from installation and operation, indirect jobs in the supply chain and induced jobs from increased economic activity.

Digital technologies can transform Mauritania's economy and promote diversification. Digital technologies drive business efficiency, facilitate expansion into new markets, and enable participation in the gig economy. They expand commerce by removing geographical barriers and increasing customer reach. Enhancing Government-to-Business (G2B) digital services will improve transparency, reduce costs, and expand business opportunities. Key reforms include adopting a Fast Payment System (FPS), updating regulations on payment services and e-money, and strengthening data collection on the digital economy.

Investments in climate-resilient infrastructure achieve multiple policy objectives. First, they are an additional source of economic growth, while mitigating the impact of climate change on people and assets. Furthermore, building climate-resilient roads and bridges helps maintain asset quality, reduces transaction costs for firms, and creates jobs in the short and medium term through construction projects. Additionally, extending irrigation systems positively impacts agricultural output, further promoting growth and job creation.

Creating a Predictable Regulatory Environment

A predictable, rules-based regulatory environment is essential for private-sector-led growth in non-extractive sectors, lowering risk and enabling firms to invest with confidence. Priority reforms include easing market entry and curbing anti-competitive privileges (opaque licensing, state-aid distortions, SOE advantages); strengthening governance and regulatory transparency; improving public resource allocation through transparent procurement and competitive PPPs; and clarifying and accelerating land titling and use rights. Streamlined trade and investment regimes (permits, customs, standards) and financial regulations that expand credit (secured transactions, collateral registries, predictable insolvency), are critical. Labor rules should facilitate formal hiring, ensure gender equity and safety, and allow balanced flexibility, while clear, interoperable digital, data, and payments regulations enable entry, innovation, and scale.

Diversification beyond extractives will depend on fostering regulatory predictability and a level playing field for all investors. The extractive sector will remain a key sector for years to come, but the generation of more and better jobs will likely result from the development of non-extractive and labor-intensive sectors. Proactive strategies to attract foreign direct investment (FDI) to non-extractive, labor-intensive sectors will drive job creation and economic growth. Regulatory foundations for market competition, judicial independence, and fiscal transparency

must be established to build investor confidence and support sustainable development. As Mauritania proves able to attract more market-seeking FDI to complement natural resource-seeking FDI, it can also contribute meaningfully to generate the kind of positive spillover effects that increases job creation and improve the quality of jobs.

Fostering a Dynamic Private Sector

A vibrant private sector and effective mobilization of private capital are essential drivers of economic growth and employment, primarily through increased investment, innovation, and business expansion. Reforms within this framework that enable technology transfer, enhance firms' access to finance, and align skills development with local market needs directly address issues of low productivity and limited job creation. These initiatives also contribute to making non-extractive sectors more appealing for private capital mobilization, including foreign direct investment (FDI).

Productivity growth in the private sector and improved labor returns can be attained through reforms focused on advancing innovation, expanding access to finance, and fostering relevant skills at the enterprise level. Technology transfer may be promoted by investing in STEM (Science, Technology, Engineering, Mathematics) education to strengthen domestic innovation and by supporting programs that encourage the adoption of digital technologies. Enhancing the effectiveness of the credit bureau and the credit registry, as well as optimizing the SME guarantee fund management and establishing Risk Sharing Facilities covering both banks and SMEs, can help mitigate information asymmetries and increase access to credit. Strengthening firm-level skills can be achieved by developing a national, demand-driven skills training and certification system (TVET) applicable to both formal and informal sectors.

Potential Growth and Job Creation Opportunities at the Sector Level

Building on these foundational drivers—upgrading human capital and infrastructure including sustainable energy and digital technologies; ensuring regulatory efficiency; and supporting firms' ecosystem—sector-specific opportunities offer tangible pathways for Mauritania's economic transformation. By strategically channeling reforms and investments into key areas such as agribusiness, tourism, and digital services, this targeted approach also complements cross-sector policy initiatives.

Mauritania's agribusiness sector, including horticulture and processed animal products, represents a significant area for economic diversification and development. In 2022, agriculture contributed 21 percent to total value added and accounted for 34 percent of employment. The horticultural sector, primarily managed by women, supplies the national market through more than 4,600 farmers. Addressing issues such as traditional farming practices, limited infrastructure, high energy costs, and barriers to finance and land title formalization could improve productivity and reduce dependence on imports. Enhancements in technical skills, infrastructure, and energy-efficient methods are considered important. The livestock sector is also prominent; 80 percent of the population owns livestock, and 16 percent work in this field. While Mauritania meets its red meat needs, there is potential for further development in processed animal products, dairy, and leather production. Challenges related to farmer education, climate change, geographic isolation, and infrastructure remain. With targeted investments, the agribusiness sector may support diversification, job creation, and sustained growth.

Mauritania is identified as having a comparative advantage in tourism due to its cultural heritage, historical sites, and desert landscapes. However, the sector's growth potential remains underutilized. Further development of the tourism industry could contribute to economic diversification if issues such as infrastructure, service quality, and connectivity are addressed. Incorporating tourism with broader trade and investment strategies may also enhance sector performance.

The adoption of digital technologies presents opportunities for transformation within Mauritania's economy, especially in the private sector, though challenges remain. The country has experienced increased mobile internet access and digital application usage, with internet penetration rising from 2 percent in 2012 to 80 percent in 2024, and user share growing from 5 percent to 44 percent over the same period. Structural obstacles have prevented

Mauritania from matching peer countries in the International Telecommunication Union's 2024 digital development index. Key limitations include low digital literacy, insufficient infrastructure, a small market size, regulatory gaps, and market deficiencies. Digital development has the capacity to increase efficiency, facilitate business expansion, and improve access to global markets. The digital services sector demonstrates growth potential, supported by recent improvements in digital infrastructure, notably in mobile connectivity. The private sector, largely engaged in trade and services, has begun adopting digital business models. Policy efforts focused on addressing both supply and demand-side challenges may further advance digital adoption.

Potential Growth and Jobs Impact of Policy Reforms

The policy reforms outlined in this report have the potential to deliver significant improvements in both economic growth and job creation, addressing both the quantity and the quality of employment (Table O.2). Our framework for prioritizing reforms includes feasibility, leverage and quantitative impact analysis. The latter is grounded in the World Bank Macro-Fiscal Model for Mauritania, and evaluates how specific reforms affect growth, employment, wages, and productivity by establishing a clear baseline and integrating robust evidence from literature. The prioritization framework helps policymakers prioritize reforms that offer the greatest returns.

Setting Reform Priorities

While a comprehensive set of reforms is essential, effective implementation requires prioritization, especially where resources and capacity are limited. The prioritization exercise in this report draws on diagnostic analysis and knowledge of Mauritania's context. Criteria for prioritizing reforms include:

- **Feasibility:** Alignment with national strategies (such as the SCAPP), government ownership, and demonstrated implementation capacity.
- **Leveraging Potential:** The reform's ability to unlock further policy changes or amplify impact across sectors.
- **Growth and Jobs Impact:** Quantitative estimates of how each reform influences growth and employment, based on model simulations.

Applying these criteria, the following key reforms have been identified, each supporting the World Bank Group's strategic framework for private sector development and job creation:

- **Infrastructure for Human Capital: Substantially increase investment in early childhood education as it lays the groundwork for a skilled and adaptable workforce.** In a rapidly changing global economy, a foundation in quality education equips the next generation with the cognitive and social tools needed to drive innovation and sustain growth. This not only addresses current educational disparities but also ensures that Mauritania can compete effectively on an international stage.
- **Regulatory Modernization: Mandate electronic processing of land transactions, incentivize formal land titling, update labor codes to enhance hiring and remove gender biases, and operationalize the new competition authority.** These reforms will modernize Mauritania's institutional landscape, increase transparency, and strengthen the rule of law—fostering trust among investors and citizens alike. Efficient land systems and fair labor practices directly encourage private sector participation, while a robust competition authority creates a level playing field, fueling productivity and economic dynamism.
- **Private Sector Development: Expand targeted investment in STEM education and support widespread technology adoption to drive innovation and productivity.** By focusing on these areas, the country can diversify its economy, reduce its vulnerability to commodity shocks, and create new opportunities for employment. Enhanced capabilities in science, technology, engineering, and mathematics will lead to the emergence of new sectors and support sustainable long-term growth.

Together, these reforms are critical for Mauritania because they address both the structural and human capital constraints that have historically limited the country's economic potential. By implementing these measures, Mauritania positions itself to transition from a resource-dependent model to a diversified, resilient economy capable of achieving upper middle-income status by 2050.

Table O.2: Selected policy options for an inclusive and resilient growth

	Priority across time frame	Real GDP	Employment	Real wage	Labor productivity
Impact (% deviation from baseline)		2030			
Combined effect		3.08	2.65	1.78	1.66
		<i>Strong infrastructure foundation</i>			
Scale-up investment in early childhood education	Long-term	2.00	0.16	2.73	2.65
		<i>Predictable regulatory environment</i>			
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.13	0.01	0.07	0.06
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	0.57	1.47	-0.58	-0.63
Operationalize the newly created competition authority	Short-term	0.33	1.01	-0.51	-0.48
		<i>Dynamic private sector</i>			
Scale-up investment in STEM and support technology adoption	Medium-term	0.05	0.00	0.06	0.06
Impact (% deviation from baseline)		2040			
Combined effect		7.44	5.03	4.87	5.25
		<i>Strong infrastructure foundation</i>			
Scale-up investment in early childhood education	Long-term	4.84	0.19	6.51	6.47
		<i>Predictable regulatory environment</i>			
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.28	0.01	0.33	0.24
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	0.85	1.65	-0.47	-0.47
Operationalize the newly created competition authority	Short-term	1.36	3.18	-1.64	-1.13
		<i>Dynamic private sector</i>			
Scale-up investment in STEM and support technology adoption	Medium-term	0.10	0.00	0.14	0.14
Impact (% deviation from baseline)		2050			
Combined effect		10.33	6.86	6.61	8.38
		<i>Strong infrastructure foundation</i>			
Scale-up investment in early childhood education	Long-term	6.42	0.14	8.65	9.21
		<i>Predictable regulatory environment</i>			
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.41	0.01	0.56	0.44
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	1.04	1.85	-0.42	-0.31
Operationalize the newly created competition authority	Short-term	2.34	4.86	-2.34	-1.13
		<i>Dynamic private sector</i>			
Scale-up investment in STEM and support technology adoption	Medium-term	0.12	0.00	0.16	0.17

Evidence-Based Benefits

Policy simulations highlight the transformative potential of these reforms. The potential impact of the reforms proposed in this report on growth and job quantity and quality is considerable:

- Operationalizing the competition authority is projected to have the largest employment impact by fostering market competition, boosting productivity, and encouraging innovation.
- Investments in early childhood education will have the most significant effect on GDP, real wages, and productivity, building a robust foundation for future growth.
- Establishing a strong fiscal framework for managing extractive revenues will help stabilize the economy and support diversification.

Sequencing for Impact

A phased approach will maximize reform effectiveness, balancing urgency with strategic foresight, ensuring that immediate actions contribute to long-term objectives:

- Short Term: Implement transparency and market-enhancing reforms such as electronic land transactions and a functioning competition authority.
- Medium Term: Focus on legislative changes and educational reforms, including labor code updates and the scale-up of STEM programs.
- Long Term: Prioritize foundational investments in human capital (beginning with early childhood education), which will yield substantial benefits for educational outcomes and economic productivity over time.

A Vision for Mauritania's Future

If these reforms are carefully sequenced and fully implemented, Mauritania could achieve Upper Middle-Income Country status by 2050. This strategic set of reforms will shift the economy from being extractive-led to a more diversified, resilient, and inclusive one, including by investing in sectors such as agriculture, tourism, fishing, and infrastructure. Reforms will enhance skills, productivity, and reduce volatility, while land and competition policies are expected to drive investment and job creation. Emphasis on early education and STEM will prepare the workforce for future needs and technology adoption. Strong public finance management will enable progress on climate and economic goals, reducing dependence on commodity prices. Effective policy sequencing is crucial for these reforms to support Mauritania's development vision, setting a robust foundation for sustainable economic growth and job creation.

CHAPTER 1

UNDERSTANDING MAURITANIA'S GROWTH, STRUCTURAL TRANSFORMATION AND JOB DYNAMICS

KEY MESSAGES:

- Mauritania's economic growth has been weaker and more volatile compared to its peers, failing to translate into sustained improvements in living standards.
- The extractive-dependent growth model, marked by limited export diversification, has left the economy highly vulnerable to shocks, exacerbating volatility and undermining the creation of more and better jobs.
- A slow pace of structural transformation is hindering productivity, limiting labor demand, and contributing to relatively high unemployment, underemployment, and low average labor earnings.
- Labor supply limitations—including low and stagnant labor force participation, especially among women, youth, and rural populations, along with a low-skilled workforce—further constrain growth and employment levels.
- The chapter points to four fundamental challenges that characterize Mauritania's economy: (i) Weak labor demand in productive sectors and low labor force participation, especially among women and youth; (ii) Weak productivity growth, constraining labor earnings and economic diversification; (iii) Limited investment in non-extractive sectors, resulting in insufficient private sector development (iv) High growth and revenue volatility, exacerbated by climate risks and commodity dependence.
- Accelerating improvements in living standards will require a shift toward a more inclusive and diversified growth model, driven by higher productivity and expanded employment opportunities.

Introduction

Despite its abundant natural resources, Mauritania's economic growth has been underwhelming. While heavy reliance on the extractive sector has generated significant revenue, lifting the country to Lower-Middle Income Country (LMIC) status, it has also left the economy highly vulnerable to commodity price fluctuations, exacerbating growth volatility. Pro-cyclical fiscal policies and the extreme volatility of resource revenues have compounded these effects, limiting the state's ability to mitigate shocks and support economic diversification. Achieving sustained improvements in living standards and transitioning to Upper-Middle Income Country (UMIC) status will require policies that drive economic diversification, boost productivity and create more and better jobs.

This chapter examines Mauritania's growth and jobs performance over the past two decades, focusing on key growth drivers, structural transformation patterns and labor market dynamics. Based on the analysis, four major challenges emerge, shaping the reform priorities discussed throughout the report: (i) Weak labor demand in productive sectors and low labor force participation, especially among women and youth; (ii) Weak productivity growth, constraining labor earnings and economic diversification; (iii) Limited investment in non-extractive sectors, resulting in insufficient private sector development; and (iv) High growth and revenue volatility, exacerbated by climate risks and commodity dependence. The chapter also explores potential growth scenarios and outlines strategies for achieving a more resilient and inclusive growth path.

A. Growth, Poverty Reduction and Structural Transformation

Mauritania's economic growth has been weaker and more volatile compared to peers (Figure 1.1 & Figure 1.2).⁵ Over the past two decades, GDP growth averaged 3.5 percent, lagging aspirational peers (4.2 percent) and frequently disrupted by external shocks (Table 1.3). This contrasts sharply with the 7.5 percent average growth target over 2022–2030 set by the 2021–2025 SCAPP action plan, a rate Mauritania has only achieved twice in the last two decades.⁶

Figure 1.1: Mauritania's GDP growth has been volatile in absolute terms

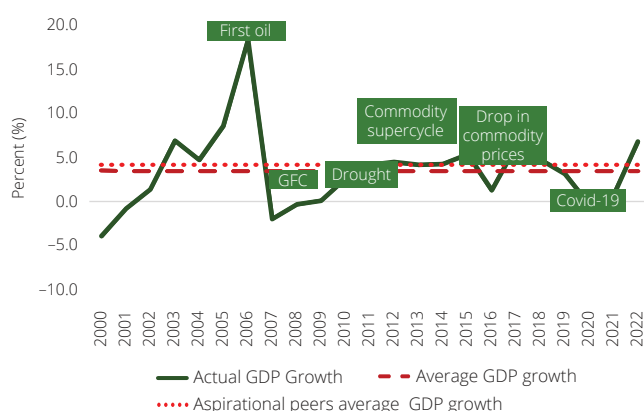
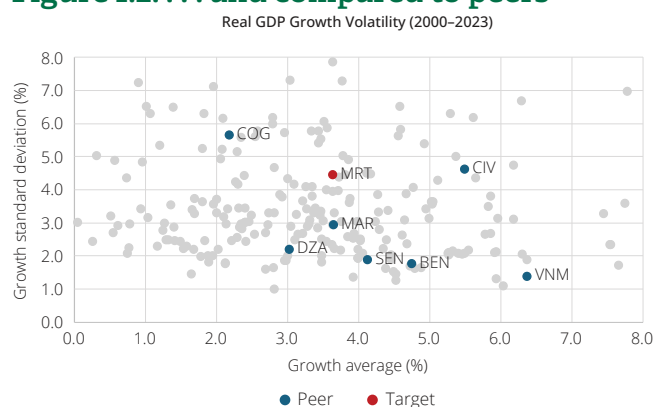


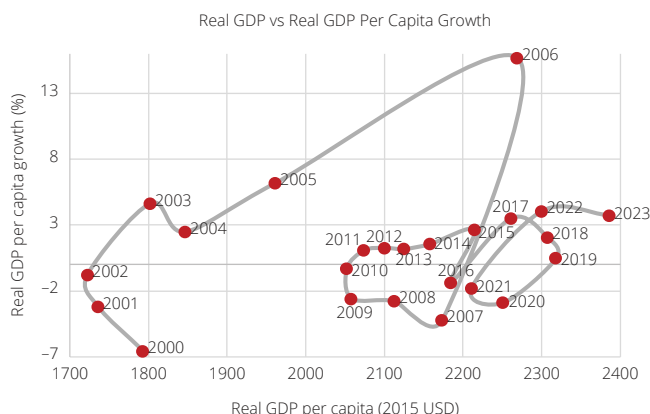
Figure 1.2: ... and compared to peers



Source: World Development Indicators, Macro Poverty Outlook, and World Bank Staff calculations.

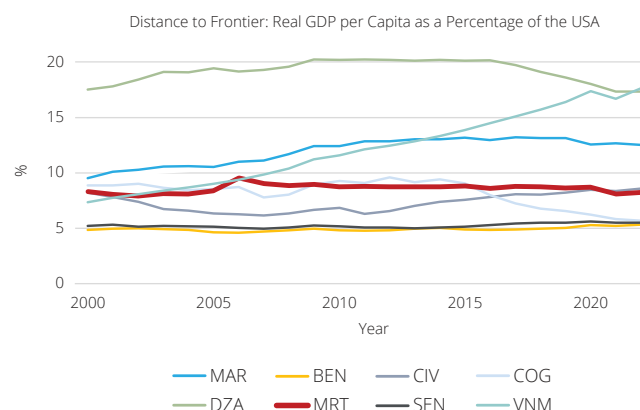
- 5 We refer to structural and aspirational peer countries. Structural peers are countries that have similar economic characteristics as Mauritania in 2015–2021. They are Benin, Congo and Senegal. The choice of aspirational peers (Morocco, Algeria, Côte d'Ivoire; Vietnam) is a combination of a data-driven approach and consultation with Mauritania authorities. See annex A1.4 for an explanation of the methodology adopted to identify structural and aspirational peers.
- 6 This happened in 2005 and 2006 during the onset of the oil production and export.

Figure 1.3: Mauritania's uneven growth has not led to lasting improvements in living standards



Source: Macro Poverty Outlook and World Bank Staff calculations.

Figure 1.4: ... preventing the country from catching up with the global frontier and its aspirational peers



Such growth dynamics reflect a classic boom-bust cycle, driven by high export concentration in minerals.

Over 70 percent of the country's exports come from the extractive sector, with iron ore (36 percent of exports in 2023) and gold (40 percent of exports in 2023) dominating. This heavy dependence on commodity exports makes economic growth highly vulnerable to global price fluctuations, leading to periods of rapid expansion followed by sharp slowdowns.

Over the past two decades, Mauritania's growth trajectory has followed four distinct phases. From 2000–2004, growth averaged 1.7 percent due to the global slowdown exacerbated by the events of September 11, 2001, and adverse weather. The 2005–2014 period saw growth reach 4.4 percent, driven by oil, copper and gold production despite the Global Financial Crisis. In the post-commodity super cycle period, from 2015–2019, growth slowed to 4.2 percent due to declining commodity prices. However, rising gold production, a rebound in agro-pastoral activity, slightly positive net exports and steady private consumption supported by urbanization-driven demand in services—helped sustain economic activity. The COVID-19 pandemic caused a recession, with growth averaging 2.3 percent from 2020–2022.

As a result, growth in per capita terms has diverged from peers, fluctuating between positive and negative values, failing to deliver sustained improvements in living standards (Figure 1.3). Mauritania's slow pace of economic convergence has prevented it from catching up with aspirational peers (Figure 1.4). Below-average growth rates have kept GDP per capita (PPP) at around half the average of aspirational peers and below half of the Upper Middle-Income threshold (4,515 in 2022, USD Atlas Method).

Despite these challenges, growth between 2014 and 2019 was pro-poor, contributing to poverty reduction, though with significant differences between urban and rural areas.⁷ Growth Incidence Curves illustrate the annualized growth rate in income per capita for each decile during this period (Figure 1.6). At the national level, growth accounted for nearly 60 percent of the decline in poverty (Figure 1.5), favoring the bottom deciles and thus contributing to reduced inequality. In urban areas (excluding the capital city), growth explained about 80 percent of the total reduction in poverty, while in rural areas, redistribution played a more significant role than growth, as bottom income deciles experienced higher growth rates, while the top deciles saw negative growth. In the capital Nouakchott redistribution had a greater impact on poverty reduction than economic growth (World Bank, 2022). Here, both the first and tenth deciles experienced negative growth rates of 0.1 percent and 2.3 percent per year, respectively, while the second to ninth deciles exhibited relatively flat growth of around 0.3 percent per year. Due to the growth contraction caused by the COVID-19 pandemic, it is estimated that poverty increased from 31.8 percent in 2019 to 33.6 percent in 2021. This increase was more pronounced in rural areas, and overall poverty averaged approximately 34 percent during the period from 2022 to 2024.

⁷ While poverty data covers a longer span, the 2014 and 2019 household survey are the most comparable as using the same methodology.

Figure 1.5: On average growth explains a higher share of poverty reduction than redistribution

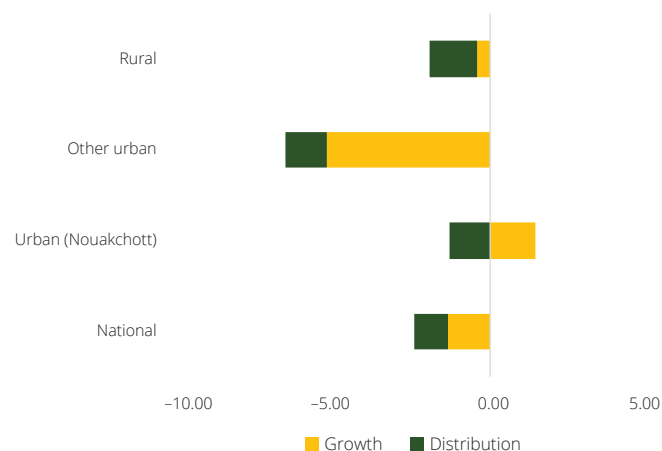
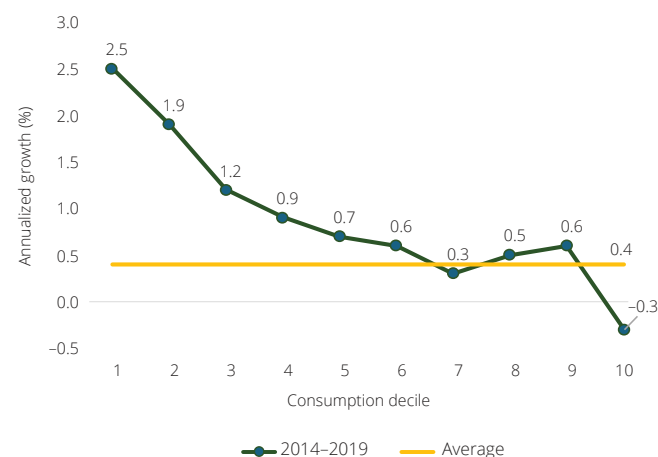


Figure 1.6: Pro-poor growth led to lower inequality



Source: Mauritania Poverty and Gender Assessment report, World Bank, 2022.

Investment has accounted for the largest share of growth, while private consumption has played a secondary role (Figure 1.7). Mauritania's economic expansion was largely fueled by public investment, which surged five-fold between 2004 and 2015, supported by a boom in extractives and debt relief. However, following the end of the commodity super cycle and a decline in extractive revenues, fiscal consolidation led to a sharp reduction in investment, dropping from 11 percent of GDP in 2015 to 6.7 percent in 2022. Private consumption also contributed to growth, while net exports had a negative impact, reflecting a decline in extractive exports and an increase in capital goods imports.

The growth has been capital-intensive, with minimal contributions from Total Factor Productivity (TFP) (Figure 1.8). Economic expansion relied primarily on natural resources and commodity-driven capital accumulation rather than productivity gains. Public investment and Foreign Direct Investment (FDI) in the extractive sector played a central role in expanding physical capital, while TFP has contributed little to growth, often negatively or negligibly. The low contribution of productivity, despite rising capital accumulation, reflects the capital-intensive nature of the extractive sector and persistent resource misallocation (see Chapter 2).

Figure 1.7: Investment and private consumption have accounted for the largest share of growth

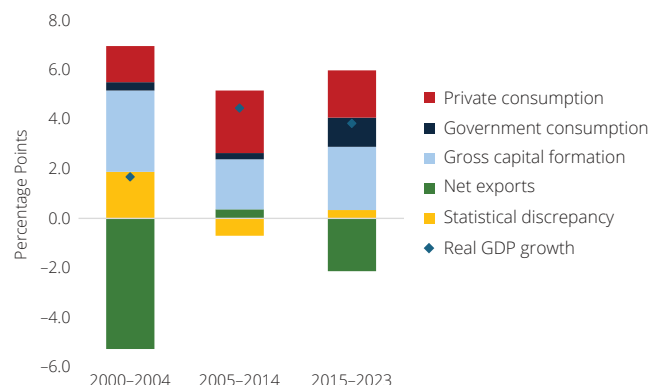
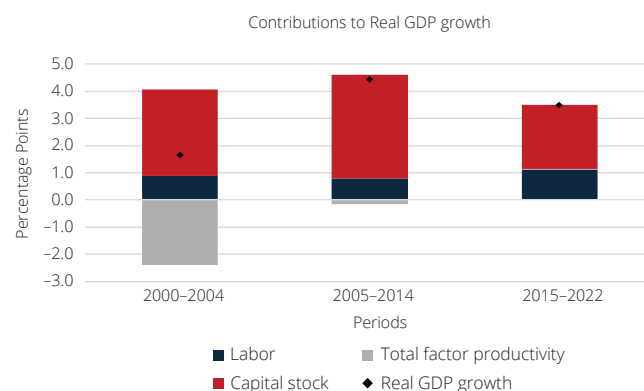


Figure 1.8: Growth was historically driven by capital accumulation



Source: Country Growth and Job Report Dashboard and Mauritania National Accounts.

Figure 1.9: Employment has shifted away from agriculture toward domestic services.

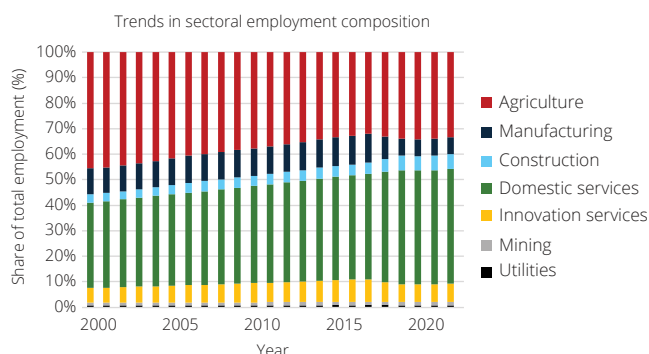
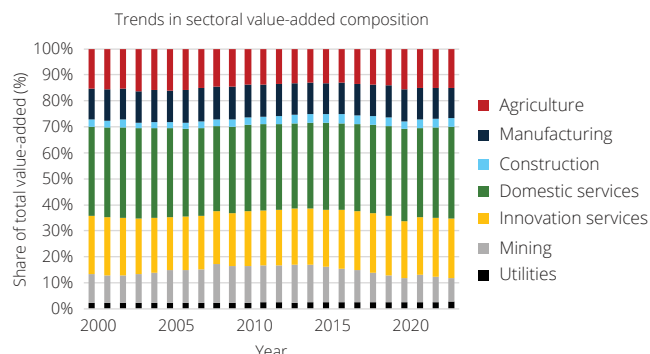


Figure 1.10: Sectoral value-added contributions have changed only marginally



Source: World Bank Structural Change and Employment Dataset.

Mauritania has made some progress in structural transformation, with economic activity gradually shifting from low- to higher-productivity sectors. Labor transitioned from agriculture⁸ to low-productivity domestic services (mainly retail trade), and to a lesser extent, construction and innovative services such as finance and ICT (Figure 1.9).⁹ In terms of value-added, the sectoral shift has been even less pronounced (Figure 1.10). While there has been some movement toward more productive activities, overall progress remains slow, further shaped by external factors such as rainfall variability, commodity price cycles, and the COVID-19 pandemic.

As a result, employment shares in both domestic services and agriculture remain well above those in comparable economies, while the value-added share of agriculture is comparatively lower (Figure 1.11 and Figure 1.12). The mining sector follows the expected pattern of a natural resource-based economy, with a high value-added share (around 10 percent) but low employment (around 1 percent). More productive, innovation-driven services exhibit similar levels of value-added per worker as in peer economies but employ relatively few workers, suggesting rigidities in modern sector expansion. At the same time, the manufacturing sector accounts for a relatively small share of employment and value added, and there are no signs that this is about to change.

Sluggish structural transformation has contributed little to labor productivity growth. Over the past 22 years, labor productivity increased by only 26 percent—significantly lower than many of Mauritania’s aspirational peers and a fraction of the 140 percent achieved by Vietnam (Figure 1.13). Most productivity gains came from within-sector improvements, particularly during the commodity super-cycle (2005–2014) (Figure 1.14). During that period, the reallocation of labor from low-productivity sectors such as agriculture to higher-productivity sectors (static reallocation), and to a small extent to sectors capable of sustaining productivity gains over time (dynamic reallocation), also contributed positively to aggregate productivity. However, this trend reversed in the years that followed.

8 In this analysis, agriculture refers to the primary sector and include agriculture, livestock and fishing. Value Added is measured in USD 2015 constant terms.

9 Following Nayyar, Gaurav; Hallward-Driemeier, Mary; and Davies, Elwyn (2021), At Your Service: The Promise of Services-Led Development (Washington, D.C.: World Bank Group), we distinguish between: i) innovation services (transport, information and communication technologies (ICT), financial services, and business services) which tend to be more tradable and innovation-intensive, and can deliver the benefits of scale, and ii) domestic services, which encompass wholesale and retail trade, hospitality, government, education, health, and other services (such as arts, entertainment, recreation, and various social, community, and personal services).

Figure 1.11: Structural transformation has been slower than in countries with similar income levels

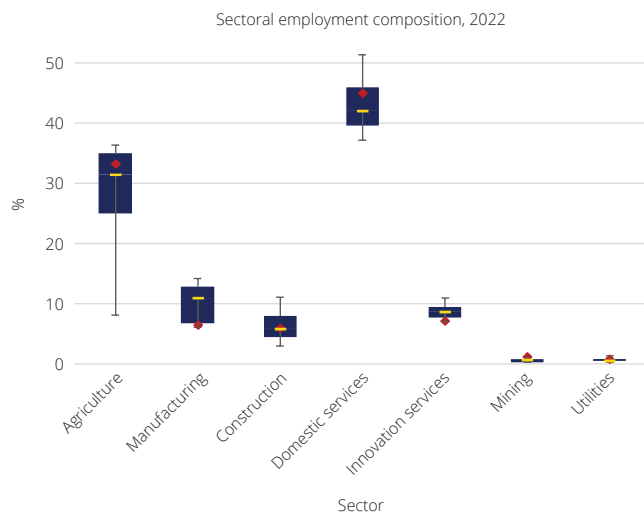
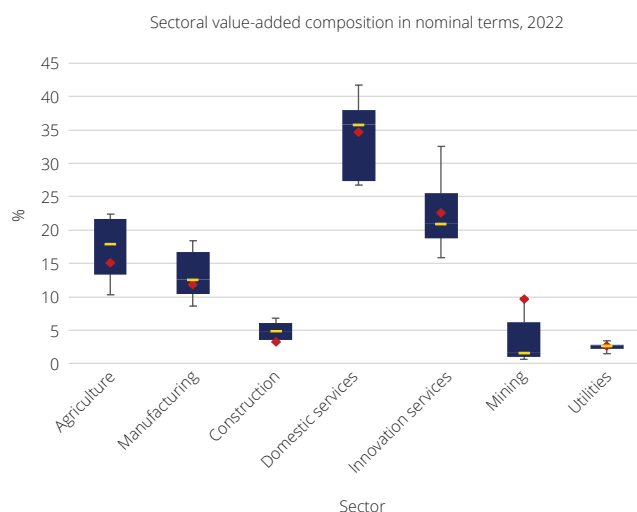


Figure 1.12: As expected in a resource-rich economy, the share of mining is high, while manufacturing remains smaller than in comparable countries



Source: World Bank Structural Change and Employment Dataset and World Bank Staff calculations.

Figure 1.13: Value added per worker relative to 2000 level, Mauritania versus peers

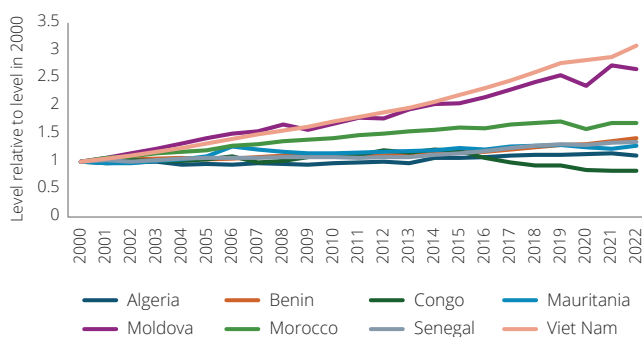
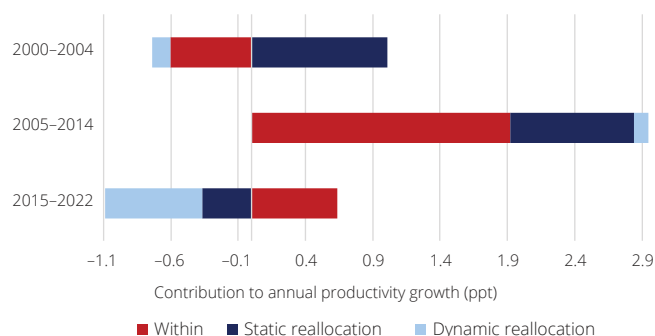


Figure 1.14: Within sector productivity has been the main driver of labor productivity



Source: WDI and World Bank Structural Change and Employment Dataset and World Bank Staff calculations.

B. Jobs and Labor Market Dynamics

The slow pace of structural transformation has also constrained the demand for jobs, contributing to relatively high unemployment (Figure 1.15), particularly among youth and women.¹⁰ This is mirrored in the employment to working-age population (WAP) that remain significantly lower than those of comparable economies. By 2025, Mauritania's population is expected to reach five million, a five-fold increase since independence in 1960,

¹⁰ Lacking recent household or labor force surveys in Mauritania, key labor market statistics (labor force participation, unemployment, wage employment, etc.) in this report are based on modeled ILO estimates.

with the country projected to have the highest working-age population growth among its peers over the next decade (Figure 1.16). While a growing working-age population creates opportunities for economic expansion, it also intensifies the pressure to generate sufficient jobs—both in quantity and quality—to absorb the expanding labor force. Domestic services representing the highest Sectoral

Employment growth over the past two decades has been relatively modest, with job creation largely concentrated in domestic services. Wholesale and retail trade, along with other services, have been the main contributors to this trend (Figure 1.17). Fueled by urbanization, low-productivity domestic services have become the largest employer, accounting for approximately 45% of total employment (Table A1. Annex). In contrast, innovation services—such as finance, business services, transport and ICT—employ only 7.2% of the workforce, with latter two experiencing a slowdown in employment growth compared to the previous decade (Figure 1.18). The main exporters—extractives and fisheries—offer limited employment opportunities, particularly the extractive sector, which remains highly capital-intensive (see Figure 1.10 above).

At the same time, labor supply challenges remain a significant challenge, including low and stagnant LFP—particularly among women, youth, and rural populations—and a low-skilled workforce. Compared to its peers, Mauritania's LFP is notably weak—in 2022, only 42 percent of the working-age population participated in the labor market, with significant gender disparities as only 27 percent of women and 58 percent of men were economically

Figure 1.15: Mauritania's employment-to-WAP and LFP rates are below those of comparable economies

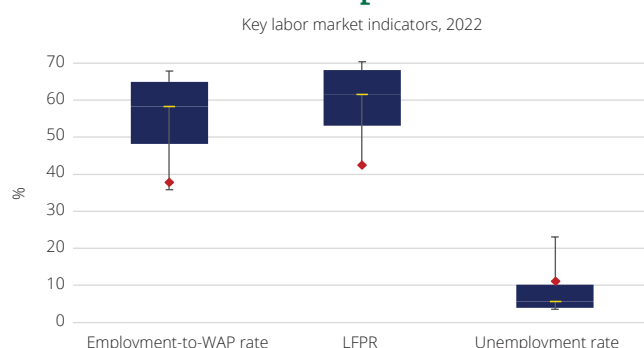
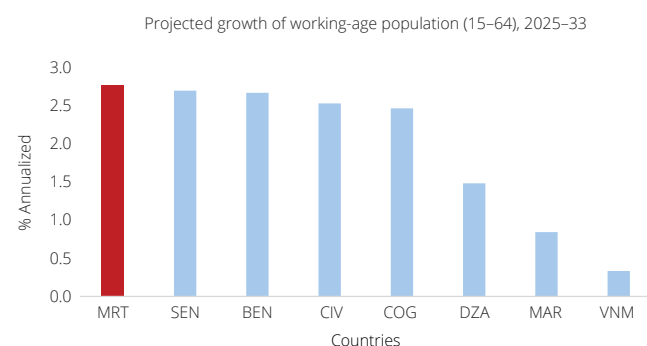


Figure 1.16: ... and the country is projected to have the highest WAP growth among its peers over the next decade



Source: World Bank Structural Change and Employment Dataset, ILOSTAT and World Bank Staff calculations.

Figure 1.17: Wholesale and retail trade, along with other services, have been the main drivers of employment growth

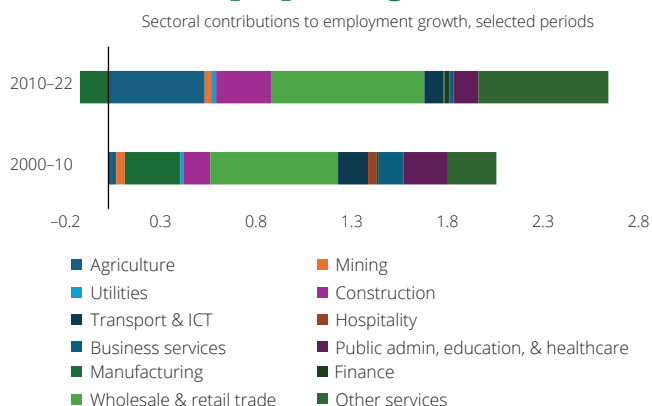
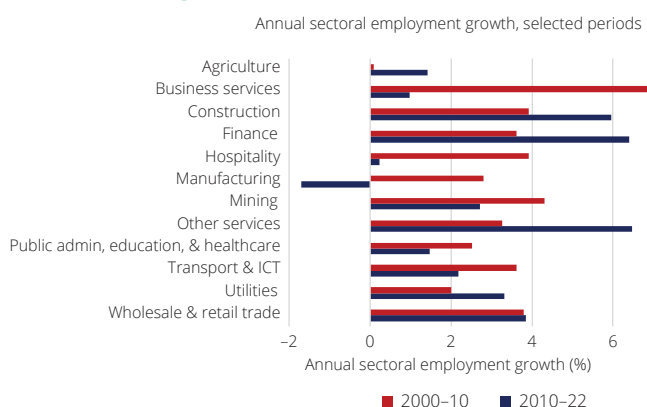
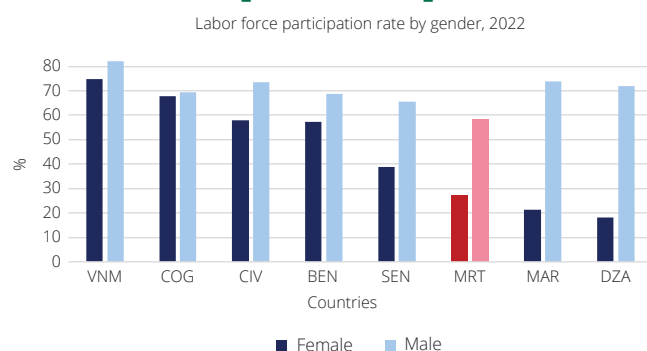


Figure 1.18: While the manufacturing sector exhibits negative employment growth over the last decade



Source: World Bank Structural Change and Employment Dataset, ILOSTAT and World Bank Staff calculations.

Figure 1.19: Female LFP rate is low compared to the peer countries



Source: World Development Indicators; ILOSTAT and World Bank Staff calculations.

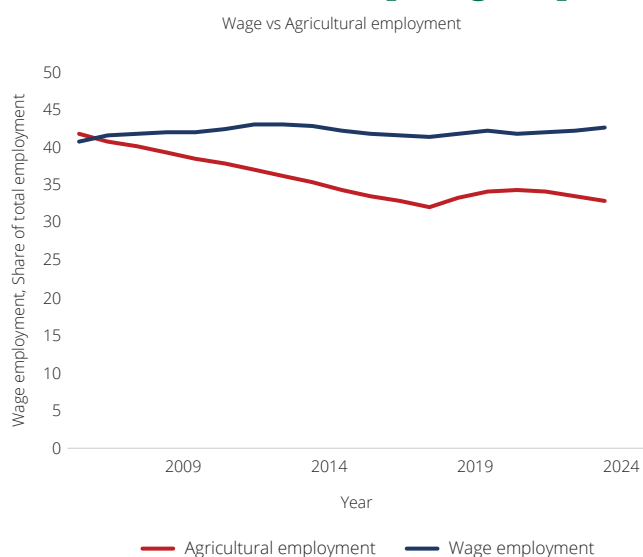
active (Figure 1.19). While gender disparities remain stark, male LFP is lower than in all peer countries and has been declining since 1991—particularly among youth (ages 15–24)—in contrast to the more stable trend observed among their female counterparts. This points to structural labor market inefficiencies that go beyond the cultural and legal barriers typically associated with low female employment. These inefficiencies include the extractives-dominated structure of the economy, which limits quality job creation and restricts entry opportunities for young workers; significant geographic disparities, with male LFP ranging from 72 percent in resource-rich districts like Tichit to substantially lower levels in regions with limited economic diversification; and persistent gaps in education.

Mauritania also has the lowest Human Capital Index (HCI) among its peers. Higher education levels are

generally associated with a greater likelihood of transitioning from agriculture and other low-productivity sectors into skill-intensive, high-productivity activities. However, average years of schooling in Mauritania remain below expectations for its income level (WDI 2020). Many women leave the workforce early to marry and raise children, which significantly lowers their participation. Education also contributes to narrowing the gender gap in LFP, but among married individuals, the gap widens significantly—reaching 57 percent overall and peaking at 59 percent among married youth.

The quality of jobs remains relatively low, despite some improvement in recent years. The share of wage and salaried workers in total employment—a proxy of job quality—has increased only marginally, despite a decline in agricultural employment (Figure 1.20 & Figure 1.21), and remains below the levels observed in aspirational peers. Mauritania’s workforce remains predominantly self-employed (Figure 1.21), with many shifting from agriculture into informal, low-paying service jobs in urban areas. This feature holds even more for women who are overrepresented in unpaid family labor and earn significantly less than men.¹¹

Figure 1.20: Wage employment has increased only marginally



Source: World Development Indicators and ILOSTAT.

Note: Mauritania is in red dot.

Figure 1.21: . . . with most of the workforce being self-employed



11 Accelerating Growth through Gender Equality in Mauritania, Gender Background Note, October 2024.

C. Mauritania's Barriers to Growth and Future Prospects

Mauritania's excessive reliance on natural resources and lack of export complexity (Figure 1.22) make its economy highly vulnerable to sector-specific shocks, whether domestic or external, contributing to weak growth and job creation. Over the past two decades, over 90 percent of exports have been concentrated in low-complexity goods such as minerals and fish (Figure 1.24). While Mauritania doubled its export share for these products, it lost ground in agriculture and introduced fewer new products compared to peers like Morocco and Côte d'Ivoire. Weak economic diversification is also reflected in investment patterns, particularly FDI, which has remained heavily concentrated in the extractive sector (Figure 1.23) and has exhibited high volatility.

High inflation and real effective exchange rate (REER) appreciation have put additional pressure on competitiveness and export potential. Between 2000 and 2022, the consumer price index nearly tripled,¹² resulting in cumulative inflation significantly higher than in structural peers. This sustained rise in prices was largely driven by rising food costs and increased domestic demand, fueled by windfalls from extractive revenues. Persistently high inflation, combined with a fixed nominal exchange rate, led to a 16 percent appreciation of the REER over the same period, contributing to mild currency overvaluation (IMF, 2024), weakening competitiveness, and exacerbating trade deficits. Along with the limited availability of skilled labor and complex business environment (see Chapter 3), this appreciation has further constrained economic diversification.

Mauritania's fiscal policy has historically been pro-cyclical and poorly equipped to mitigate the volatility inherent in extractive sector revenues, undermining efforts to foster structural transformation and economic diversification. Extractive sector revenues have shown far higher volatility (a standard deviation of 56.0 in 2007–24) than non-resource revenues (14.8) (Figure 1.25). In turn, this has complicated macroeconomic management and budget planning. During commodity booms (e.g., 2011–2015), revenues were often allocated to irreversible expenditures (e.g., wage hikes, subsidies) or inefficient public investments, including low-productivity “white elephant” projects, without adequate safeguards to smooth fiscal shocks. Weak Public Investment

Figure 1.22: The complexity of the Mauritania's economy is low ...

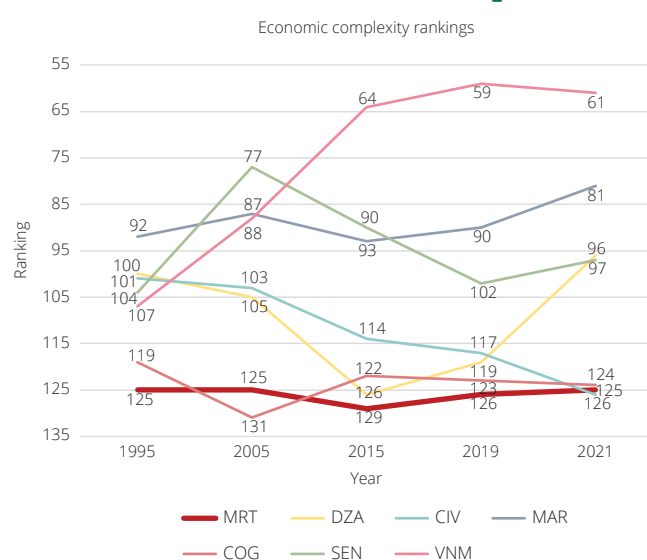
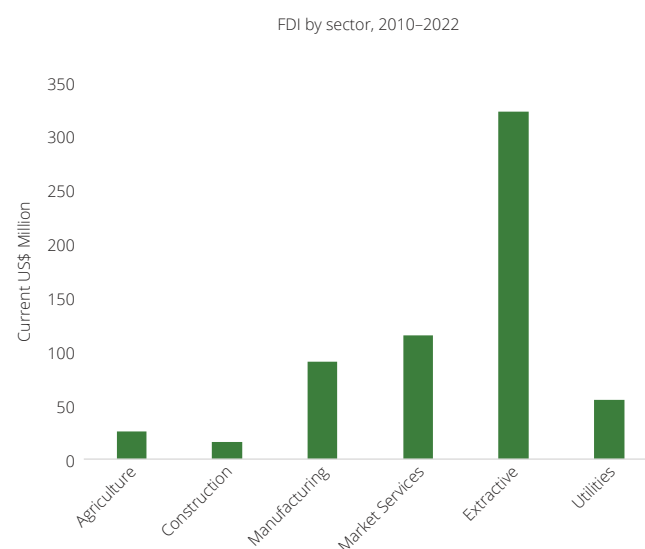


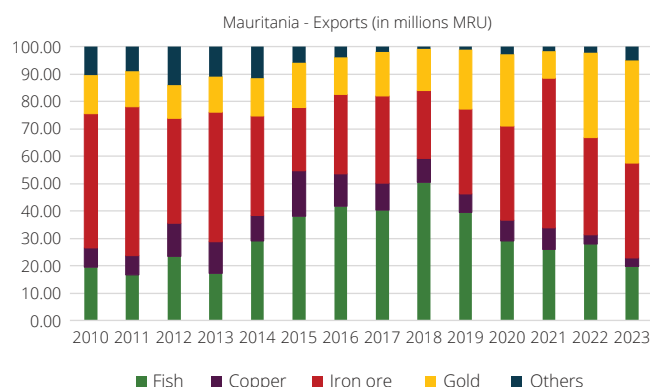
Figure 1.23: ... reflecting the concentration of FDI on extractives ...



Source: Harvard Growth Lab, World Development Indicators, Agence de Promotion des Investissements (APIM) and World Bank Staff calculations.

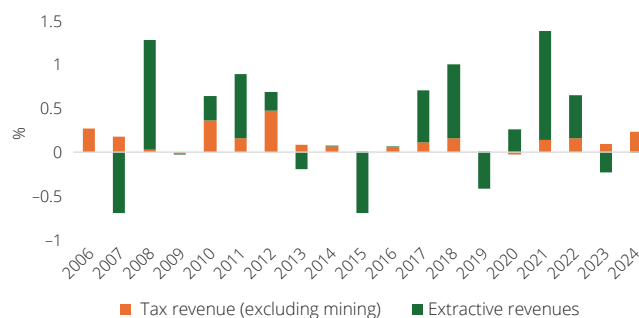
12 Inflation data are sourced from the WDI and Macro Poverty Outlook; REER data are from Bruegel.

Figure 1.24: . . . and the concentration of exports on extractives



Source: Harvard Growth Lab, World Development Indicators, Agence de Promotion des Investissements (APIM) and World Bank Staff calculations.

Figure 1.25: Extractive revenue displays significant year-over-year volatility



Source: Ministry of Finance data and World Bank Staff calculations.

Management (PIM) further diluted the growth impact, while off-budget spending by state-owned enterprises circumvented oversight, exacerbating governance risks. Despite significant social sector investment, human development gains lagged, and wealth accumulation occurred among narrow segments of the population, particularly in non-productive assets like real estate.

Notably, the Fonds National des Ressources de l'Hydrocarbure (FNRH), initially established to ensure efficient, equitable, and intergenerationally equitable management of hydrocarbon resources, has struggled to meet its original objectives. Due to oil production shortfalls and conservative investment returns, the fund failed to accumulate substantial savings and instead evolved into a discretionary budget stabilization tool, primarily used to cover fiscal deficits. Weak public financial management (PFM) systems have further undermined its effectiveness, as FNRH transfers remain poorly integrated into the budget process, limiting their potential for development financing. Additionally, governance deficiencies including inadequate institutional structures, a lack of technical expertise, and insufficient transparency and accountability—have constrained the fund's impact (Box 1.1).

Weak governance in Mauritania hampers growth by creating inefficiencies in labor markets, price determination, access to goods and services, asset values, public service delivery and the regulatory environment. As further discussed in Chapter 3, Mauritania lags the LMIC average and most peer countries in key indicators such as regulatory quality, government effectiveness, control of corruption, and business regulations (Figure 1.26 and Figure 1.27). The issue of corruption is prominent and primarily arises from pervasive conflicts of interest, as powerful business groups with political connections control trading monopolies and dominate state procurement contracts, particularly in the agriculture and manufacturing sector. This adversely affects growth through inefficiencies, lower productivity and increased costs of doing business.

Sectoral distortions¹³ pose a significant barrier to long-term growth, with estimates suggesting that a 1 percent reduction in domestic distortions could increase GDP by more than 1.5 percent (Figure 1.28). These distortions disrupt cross-sectoral trade, leading to inefficient resource allocation. Domestic distortions include policies that favor one sector over another, such as sector-specific taxes or regulations, or special credit considerations. They seem to be particularly relevant in manufacturing and agriculture, forestry and fishing where a reduction of 1 percent would yield GDP gains of 0.49 percent and 0.18 percent, respectively (Figure 1.29). External distortions—affecting cross-border trade—include trade costs, tariffs on imports or exports, border taxes, or differences in contract enforcement. Reducing external distortions by 1 percent could increase GDP by 0.25 percent.

13 This estimation builds on the methodology developed by Caliendo, Parro, and Tsyvinski (2022).

Box 1.1: How fiscal revenues from extractives can boost critical investments for diversification and growth

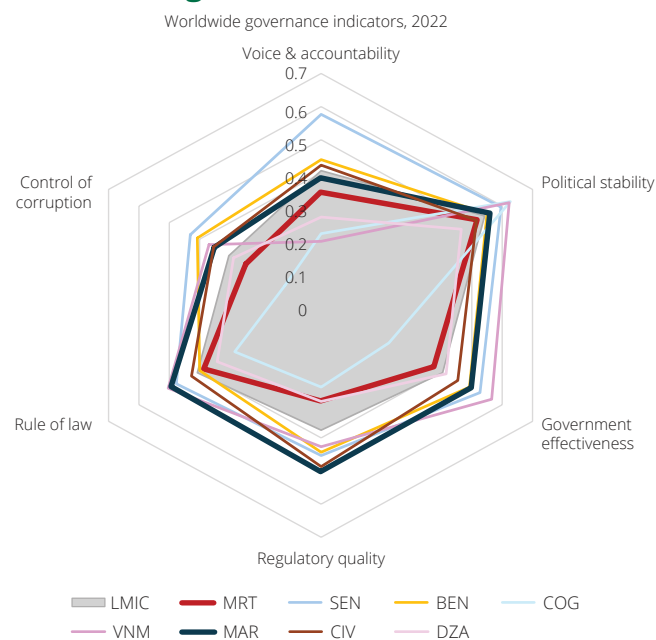
Historically low levels of extractive revenue mobilization and inadequate revenue and spending management have hindered the conversion of natural wealth into productive capital for critical public investments in Mauritania. Strengthening resource revenue management would help open up fiscal space for much-needed capital spending on education and health, physical infrastructure, and climate resilience—all critical for economic diversification, growth, and job creation. Mauritania is a member of the Extractive Industries Transparency Initiative (EITI), and its Law 2008–20 related to the management of hydrocarbon revenues establishes the transfer of hydrocarbon resources to its stabilization fund, the Fonds National des Ressources de l'Hydrocarbure (FNRH). In practice, however, inadequate resource revenue management has prevented Mauritania from taking fuller advantage of its natural endowments. Mauritania has confronted inter-related issues associated with (i) revenue volatility and pro-cyclical fiscal spending; (ii) the budgetary framework for resource revenue management; (iii) the effectiveness of its stabilization fund; and (iv) the absence of fiscal rules tailored to the country's macro-fiscal characteristics. Also, public investment management exhibits several weaknesses, including poor project selection, inefficient public procurement procedures, limited capacity among staffs and insufficient ex-ante and ex-post evaluation mechanisms.

The extractive sector, particularly mining, contributes significantly to Mauritania's economy (20 percent of GDP in 2023) but the revenues it generates are relatively low (3.1 percent of GDP) and highly volatile (see Figure 1.25). Mauritania has responded to this volatility through procyclical fiscal policies, where public investment closely follows the fluctuations in metal markets. The lack of long-term planning has resulted in a “stop-and-go” pattern in public investment, negatively impacting infrastructure quality.

Mauritania's stabilization fund—the FNRH—feeds the annual state budget according to guidelines set out in the annual finance law, but key reforms are needed to increase its effectiveness. In particular, the FNRH should be expanded to manage all extractive sector revenues, with a primary role in stabilizing the state budget. Furthermore, its transparency and governance need significant improvement (Rahim *et al*, 2021). A rule-based approach to fiscal policy focusing on the non-extractive primary balance is being piloted as part of the ongoing IMF program but need to be institutionalized.

Improving public investment management in Mauritania can greatly enhance the country's ability to direct resource revenues into crucial investments in human and physical capital. Key measures include better project selection, monitoring, evaluation, and efficient public procurement processes. Rigorous criteria for project selection will prioritize investments with the highest returns in economic growth and social development. Enhanced monitoring and evaluation ensure projects are effectively executed and deliver intended outcomes. Efficient procurement practices reduce costs and increase transparency. These measures create a robust investment environment, attracting private investments.

Figure 1.26: Mauritania performs below peers in most of the governance indicators ...



Source: Worldwide Governance Indicators, Fraser Institute, and World Bank Staff calculations.

Figure 1.27: ... but also, in the areas of business regulation and competition ...

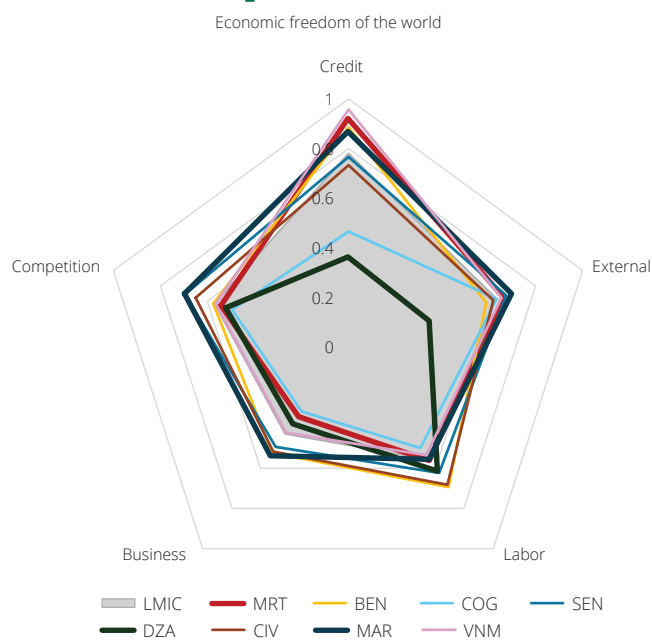
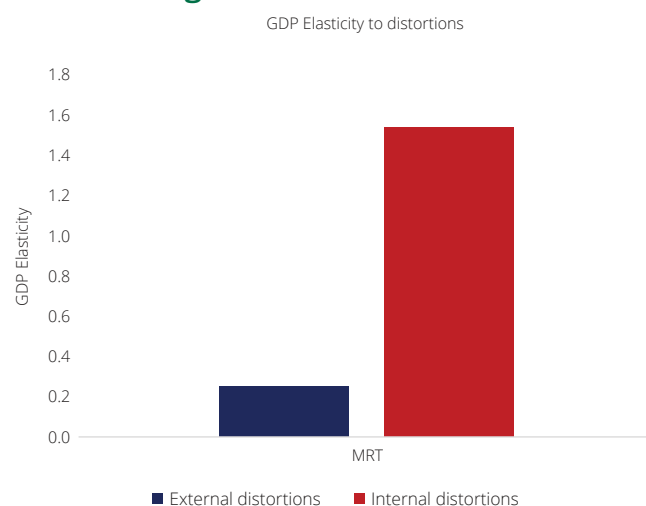


Figure 1.28: Sectorial distortions constrain growth ...



Source: GLORIA Database and World Bank Staff calculations.

Figure 1.29: ... mainly in manufacturing, agriculture and fishing

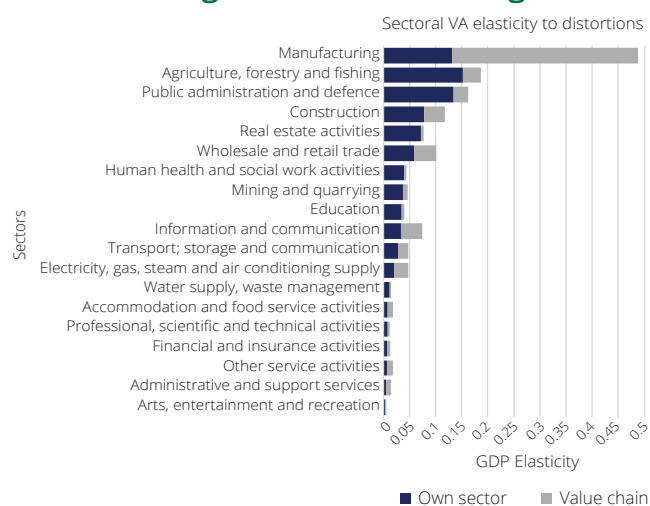


Figure 1.30: Mauritania could lose 9.3 percent of GDP by 2050 under the pessimistic scenario. . .

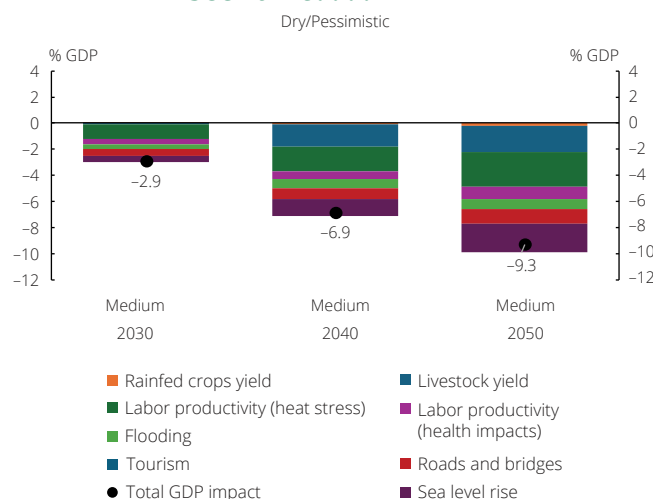
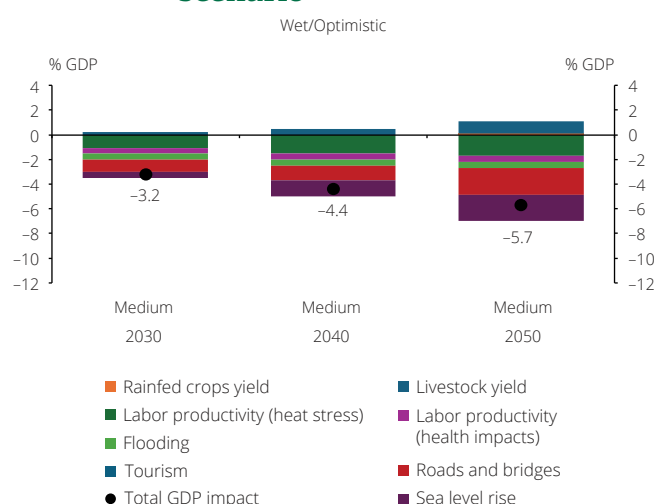


Figure 1.31: . . . and 5.3 percent of GDP by 2050 under the optimistic scenario



Source: Rapport sur la Situation Economique de la Mauritanie: Naviguer dans la Tempête—Comment l'Urbanisation et le Changement Climatique Affectent les Risques d'Inondation en Mauritanie (French). Washington, D.C.: World Bank Group.

Mauritania's high vulnerability to climate change can significantly constrain its growth prospects. The Vulnerability Score indicates that Mauritania faces a greater degree of climate vulnerability than any of its peer countries.¹⁴ The 2022 G5 Sahel Country Climate and Development Report projects rising temperatures and increasing precipitation variability in the coming decades. By 2050, climate change could reduce Mauritania's annual GDP by between 5.7 percent and 9.3 percent, depending on the scenario (Figure 1.30 and 1.31). Chapter 4 discusses the fiscal, growth and job impacts of addressing climate-related challenges Mauritania faces.

Mauritania aspires to become an UMIC by 2050 (Figure 1.32), but a Business-As-Usual (BAU) approach will not be sufficient to achieve this goal. Over the past two decades, Mauritania transitioned to LMIC status, primarily driven by extractive revenues and mineral windfalls. However, the next transition will be more challenging, as continuing with the current extractives-led growth model and historical growth rates would mean that Mauritania would only reach UMIC status in a century (Figure 1.33). This underscores the urgent need for a new growth model that fosters economic diversification, productivity gains, and inclusive job creation at scale.

Comparisons with Namibia, Botswana, and Vietnam highlight the importance of high and sustained GDP per capita growth for achieving UMIC status (Table 1.1). Even Namibia, the weakest comparator, achieved an average GDP per capita growth rate of 1.7 percent during its convergence period (1990–2020) twice Mauritania's historical rate of 0.9 percent. Additionally, Mauritania's was less consistent as illustrated by relative lower number of positive GDP per capita growth episodes.

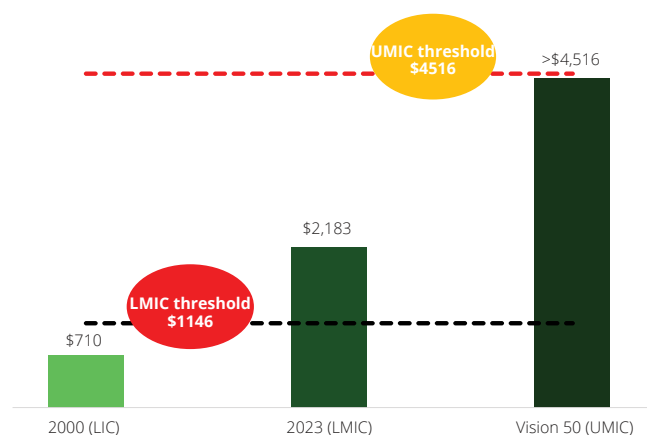
Considered long-term scenarios assume closing or reducing the current gaps between Mauritania and selected UMICs in key growth drivers (Figures 1.34 to 1.37). The country lags significantly in human capital, with a 2020 Human Capital Index of 0.38, compared to 0.47 for peers and 0.52 for UMICs. Despite higher investment as a share of GDP, inefficiencies result in lower infrastructure quality. Additionally, widespread informality,¹⁵ weak labor force skills and governance challenges continue to hinder economic progress.

14 Based on data from the Notre Dame Global Adaptation Initiative (ND-GAIN).

15 However, informality may also be a symptom of the underlying economic challenges.

Figure 1.32: Mauritania's ambition is to become an Upper-Middle Income country by 2050 . . .

Mauritania Progress and Goal



Source: MFMod-GJ, World Bank Income Classification and staff's calculations. USD values are based on GNI (Gross National Income) calculated using the Atlas method.

Figure 1.33: . . . but business as usual will not suffice

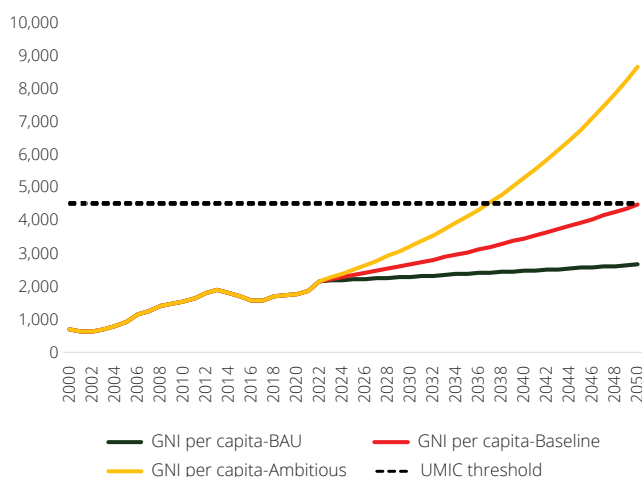


Table 1.1: Growth path of selected countries that have achieved the UMIC status

	Number of years to reach the UMI status	Average GDP growth (percent)	Average GDP per capita growth (percent)	Frequency of growing years (percent)
Botswana (2005)	16	5.1	2.6	100.0
Namibia (2010)	20	4.1	1.7	94.1
Vietnam (close to the UMI threshold)	11	6.1	5.0	100.0
Moldova (2019)	9	4.2	5.0	80.0
Mauritania (historical average 2000–2022)		3.5	0.9	74.6

Source: World Bank staff's calculation based on World Development Indicators.

Figure 1.34: Ambitious reforms will be needed on human capital . . .

Human capital index (HCI), Scale [0 to 1], 2020

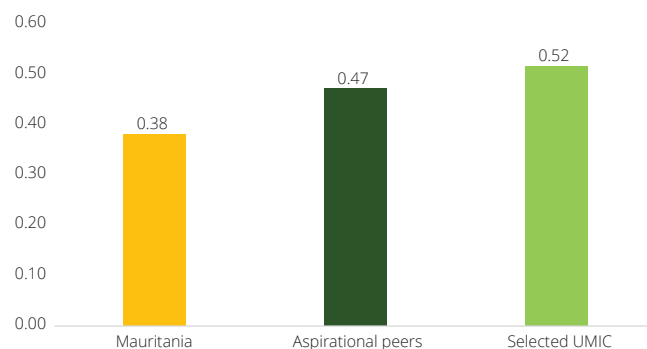


Figure 1.35: . . . on physical capital

Spending are higher, but efficiency is lower

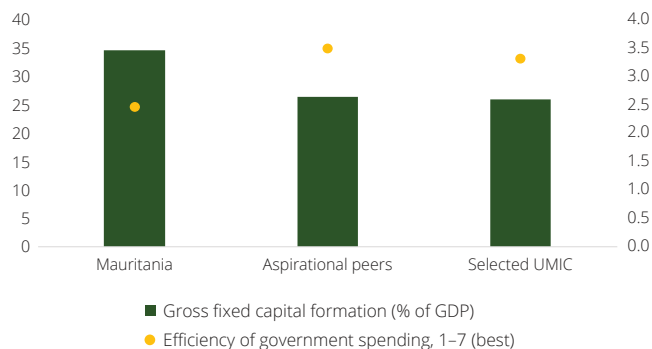


Figure 1.36: ... on labor markets

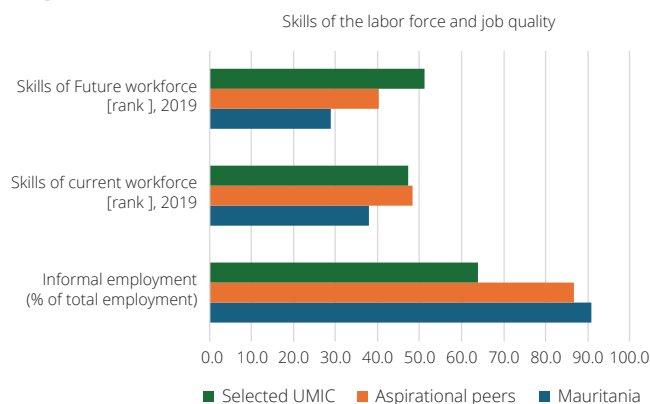
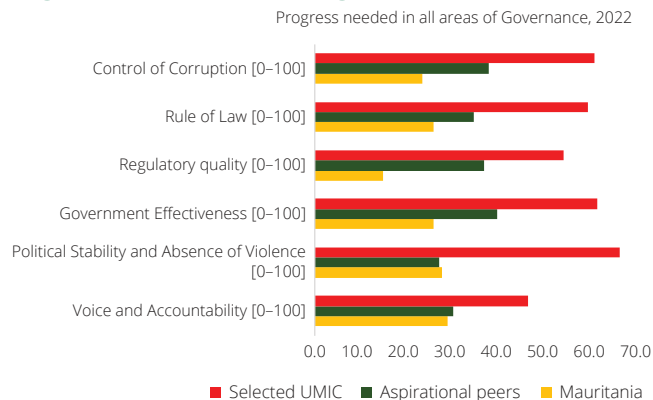


Figure 1.37: ... and on governance



Source: World Development Indicators, World Economic Forum (WEF) Global Competitiveness Index, ILOSTAT.

To evaluate Mauritania's potential growth trajectories, three scenarios are considered, each reflecting a different approach to economic transformation and resulting in different convergence speeds toward achieving UMIC status (Table 1.2). The BAU scenario relies heavily on extractive industries, resulting in growth and productivity levels consistent with historical trends. The medium-growth scenario aims to establish the foundations of a diversified economy by leveraging extractive resources to invest in non-extractive, labor-intensive sectors such as agriculture, fishing and infrastructure. Additionally, it focuses on developing skills and institutions to enhance productivity growth and reduce economic volatility. Achieving this scenario necessitates nearly doubling the rate of human capital accumulation and tripling TFP productivity growth. The ambitious growth scenario seeks to further diversification and technological advancement, increasing sophistication through value upgrading. In this scenario, Mauritania is projected to attain UMIC status within the next 16 years, contingent upon implementing extensive reforms to elevate TFP growth and human capital to the average levels of UMIC countries.

To accelerate sustained improvements in living standards, Mauritania must boost productivity and expand productive employment opportunities by addressing the broad structural challenges identified in this chapter. While multiple challenges to growth and job creation have been diagnosed, four overarching challenges emerge, reflecting the limitations of the current extractives-dependent growth model: (i) Weak labor demand in productive sectors and low labor force participation, especially among women and youth; (ii) Weak productivity growth, constraining labor earnings and economic diversification; (iii) Limited investment in non-extractive sectors, resulting in insufficient private sector development; and (iv) High growth and revenue volatility, exacerbated by climate risks and commodity dependence.

Table 1.2: Possible long-term growth pathways

Key outcomes/inputs	BAU (average 2023–2050)	Medium-growth-scenario (average, 2023–2050)	Ambitious scenario (average 2023–2050)
GDP growth	3.6	5.5	7.9
GDP per capita growth	0.9	2.8	5.6
Productivity-TFP growth	0.5	1.5	1.9
Human Capital Index-growth	1.0	1.7	2.2
Investment (percent of GDP)	23.7	24.0	30.6
Number of years of education	6.2	7.9	9.0

Source: MFMod-GJ.

Tackling these challenges requires a multi-pronged reform effort with several complementary policy actions. First, fostering productivity growth necessitates removing barriers to technology adoption and addressing policy distortions that lead to resource misallocation (Chapter 2). Second, to promote economic diversification, Mauritania must attract greater investment in the non-extractive private sector (Chapter 3). Box 1.2 shows the potential of the agribusiness to support the diversification process in Mauritania. Building a private sector that drives both economic growth and quality job creation requires removing cross-cutting and sector-specific challenges that hinder the development of large-scale formal enterprises outside of mining and fishing, where most formal jobs are currently concentrated. It also involves strengthening human capital, ensuring its effective use, and better integrating its underutilized female workforce. Only a climate-resilient growth path—one that addresses both physical and transition risks from climate change—can enable Mauritania to converge toward its aspirational peers and achieve UMIC status (Chapter 4). Developing a robust fiscal framework to manage extractive revenues and ensure macro-fiscal stability is critical to support these efforts, given the risks associated with revenue volatility. Key components would entail fiscal rules, such as a Non-Resource Primary Balance (NRPB), a ceiling on public debt and a target debt anchor, as well as principle-based expenditure smoothing mechanisms which allocate revenues above a certain threshold to a stabilization fund or directing funds towards debt reduction should also be considered. Chapter 5 presents a comprehensive set of policy recommendations and provides a framework for quantifying their impact on growth and jobs.

Box 1.2: Agribusiness offers promising opportunities for diversifying the Mauritania's economy

Mauritania's agribusiness, especially in horticulture and processed animal products, has potential for economic growth. Agribusiness in Mauritania is a sector with significant potential for development. With its extensive arable lands and location along the Senegal River, the country may experience agricultural transformation. Addressing issues such as infrastructure deficits, financing, and lack of technical expertise could enhance this potential, diversify Mauritania's economy, and improve food security. Sub-sectors such as horticulture and processed animal products may provide opportunities for growth.

1-Horticulture. The horticultural industry in Mauritania operates both up- and downstream, primarily serving the national market. It is predominantly an activity involving women, with females making up 90% of the labor force in this sector. In 2017, there were over 4,600 horticultural farmers in Mauritania (ANSADE, 2017). With a growing demand for vegetables consumption (consumption is projected to increase by 123% between 2020 and 2030), the country is aiming to reduce its reliance on imported horticultural products (ENABEL, 2020). The horticultural sector in Mauritania faces several constraints that hinder its modernization and productivity. Farmers rely on traditional methods due to a lack of technical expertise. Inadequate infrastructure and poor road networks cause significant post-harvest losses, with up to 90% of produce wasted. The absence of grid electricity forces farmers to use costly diesel pumps, increasing energy expenses by 70%. High water consumption from the lack of drip irrigation limits yields and profits. Access to financing is difficult due to high interest rates and stringent collateral requirements. Additionally, formal business creation is hampered by obstacles in formalizing land titles, overlapping government mandates, and the absence of a land administration system.

2-Processed animal products. The livestock industry is crucial to Mauritania's economy, with 80% of the population owning livestock and 16% employed in the sector. Domestic cattle consumption is expected to quadruple between 2020 and 2100 (APIM, 2022). Mauritania produces 40% more red meat than needed domestically, showing its strength in this area. The processed animal products industry, mainly serving the national market, has high growth potential. While self-sufficient in meat, Mauritania's dairy and leather industries fall short of meeting demand. Challenges include poor farmer education, climate change, geographic isolation, high loan collateral requirements, and inadequate dairy infrastructure. Banks do not accept livestock as guarantees, limiting farmers' access to credit. With proper investment and support, the industry can overcome these issues, using land and water resources to boost productivity and sustainability, thereby reducing poverty and promoting economic growth.

Table 1.3: Selected economic indicators, 2000–2023

	Mauritania					Comparators (2014–2023 avg.)		Source
	2005– 2014	2015– 2023	2021	2022	2023	Structural	Aspirational	
Real/Income								
Real GDP growth, market prices	4.4	3.8	0.7	6.8	6.5	3.7	4.6	Custom
Investment, % change	4.6	0.3	12.1	3.4	–15.3	8.7	6.9	Custom
Public	4.6	0.3	12.1	3.4	–15.3	9.2	9.9	MPO
Private	4.6	0.3	12.1	3.4	–15.3	10.3	8.1	MPO
Consumption, % change	4.2	4.4	7.5	6.1	5.6	3.5	4.8	MPO
Public	2.6	8.6	26.8	14.3	10.6	3.4	5.2	Custom
Private	4.6	3.4	3.3	3.9	4.2	3.7	4.8	Custom
Net exports, % change	–134.5	129.6	19	12.7	–10.3	–283.2	62.1	MPO
Exports	9.1	2.6	–12.9	16.8	3.5	4.1	5.1	Custom
Imports	7	6.6	–3.3	15.3	–1.5	5.4	6.5	Custom
Investment, % of GDP	34.2	29.5	30.8	29.8	23.7	26.6	29.5	MPO
Public	7.9	6.8	7.1	6.9	5.5	5.3	7.5	MPO
Private	26.3	22.7	23.7	22.9	18.2	21.3	22.4	MPO
Consumption, % of GDP	68.3	70.7	73.9	73.5	72.9	73.1	69.2	MPO
Public	12	13.8	15.7	16.8	17.4	12.8	13.6	MPO
Private	56.4	56.9	58.2	56.7	55.4	60.3	55.6	MPO
Net Exports, % of GDP	–2.6	–12.2	–21.4	–22.6	–19	–0.5	–3.3	MPO
Exports	45	41.4	36.3	39.7	38.6	36.2	40.7	MPO
Imports	47.7	53.6	57.7	62.3	57.6	36.7	44	MPO
								MPO
Potential GDP growth	4	3.8	3.2	3.7	3.7	4.2	5.1	MPO
Distance to frontier, GDP pc as % of USA's GDP pc	8.9	8.6	8.1	8.2		6.1	13.1	CT
Real GDP growth (LCU)	4.4	3.8	0.7	6.8	6.5	3.7	4.6	Custom
TFP, contribution (ppt)	–0.2	0	–2.3	2.7		–1.1	0.2	MPO
Capital accumulation, contribution (ppt)	3.8	2.3	1.6	2.1	2.1	3.6	3.6	MPO
Labor, contribution (ppt)	0.8	1.1	1.4	2.1		1.2	0.8	MPO
								MPO
Inclusion								
Poverty rate, \$2.15 poverty line	6.5	5.9	5.7	6.2	6.4	28.1	5.3	MPO
Gini Inequality Index	34.2	32				41.4	36.9	WDI
Demographics and Jobs								
Age dependency ratio (% of working-age population)	90.7	89.3	88.1	87.1	86.1	82.8	58.8	WDI
Employment to working-age population ratio	40.6	37.8	37.1	37.7	37.6	58.8	57.4	
Male	57.4	53.5	52.8	53.7	53.5	64.6	72.3	ILO
Female	24.9	23.4	22.8	23	23	53.1	42	ILO

(continues)

Table 1.3: Selected economic indicators, 2000–2023 (Continued)

	Mauritania					Comparators (2014–2023 avg.)		Source
	2005– 2014	2015– 2023	2021	2022	2023	Structural	Aspirational	
Labor force participation rate	45	42.2	41.8	42.1	42	64.4	61	ILO
Male	62.7	58.7	57.8	58.5	58.2	70.1	77.1	ILO
Female	28.4	27.2	27.1	27.2	27.1	58.8	44.4	ILO
Unemployment rate	9.8	10.5	11.1	10.5	10.4	8.4	6.8	ILO
Male	8.6	8.8	8.7	8.2	8.1	7.9	6.3	ILO
Female	12.4	14	15.9	15.3	15.1	9	9	ILO
Structural Transformation								
Real GDP growth, factor prices, % change	4.2	3.7	0	9.8	4.3	3.8	4.7	Custom
Agriculture	2.5	4.2	–2.9	8.7	–1	4.3	4.3	Custom
Manufacturing	3.2	1.2	–11.5	12.5	5.8	3.2	5	Custom
Services	9.2	5.8	10.7	8.6	5.8	4.4	5.1	Custom
Agriculture, % of GDP	17.5	20.8	19.1	21.2	18.7	15.9	13	WDI
Manufacturing, % of GDP	37	27.7	32.1	29.1	30.6	31.6	30.2	WDI
Services, % of GDP	39.2	43.3	41.3	44.6	43.8	44.4	46.1	WDI
Sectoral composition of employment								
Agriculture	38	33.3	33.9	33.3	32.7	34.9	34.4	WDI
Manufacturing	16.7	15.7	14.6	14.5	14.7	20.8	22.1	WDI
Services	45.3	51.1	51.5	52.2	52.6	44.3	43.5	WDI
Employment Structure								
Share of waged employment in total working age population	17	15.8	15.5	15.9	16	12.1	24.5	ILO
Average years of schooling, share of HIC average	34.8	38.9				38	50.1	PWT
External								
Current account balance, % of GDP	–16.9	–11.1	–8.5	–14.9	–9.1	–3.9	–0.6	
FDI, % of GDP	9.6	7.3	11.6	14.7	8	5.3	2.4	
Exchange rate, LCU/USD	27.4	35.8	36.1	36.9	36.6			Custom
REER	104.6	97.1	94.1	104.7	108.8			MPO
Reserves, months of imports	2.5	3.9	5.4			4.6	11.5	WDI
Memo items								
Credit to private sector, % of GDP	17.8	21.4				16.7	49.6	
Interest rate, annual average	8.6	7.2	5	7	8	3.5	4.2	Custom
Inflation, CPI	4.3	3.6	3.6	9.5	5.1	2.6	4	MPO
Fiscal deficit, % of GDP	–1.9	0	2.3	–3.8	–2.4	–0.5	–2.7	MPO
Public debt, % of GDP	42.5	54.9	52.4	48.5	46.4	57.8	42.1	MPO
-of which external, % of GDP	38.4	48.9	45.8	42.3	40	39.1	13.7	MPO

Note: Structural peers include Benin, Congo and Senegal. Aspirational peers include Morocco, Algeria, Côte d'Ivoire, Vietnam. CT: convergence tool.

Table 1.4: Employment growth and share

	Employment annualized growth							Employment share		
	2005–2014	2015–2022	2020	2021	2022	Structural peer average 2015–2022	Aspirational peer average 2015–2022	2022 (last year available)	Structural peer average (2023)	Aspirational peer average (2023)
Total Employment	2.0	2.9	1.6	3.4	5.1	3.7	0.4			
Agriculture	–0.2	2.8	1.9	2.9	3.1	2.4	–3.1	33.3	31.6	25.5
Mining	3.3	4.3	9.0	3.5	5.8	9.8	1.3	1.3	0.8	1.0
Manufacturing	2.7	–4.6	2.2	3.0	5.1	3.2	3.8	6.6	12.1	15.3
Utilities	3.0	1.7	1.5	1.8	4.5	0.3	6.4	0.8	0.4	0.8
Construction	3.6	7.4	3.7	6.8	4.9	7.4	3.0	5.9	4.9	10.3
Wholesale & Retail Trade	3.6	4.0	0.2	4.2	6.2	6.1	2.1	22.6	23.7	18.4
Transport & ICT	3.7	1.0	0.6	4.8	8.0	6.3	1.9	4.6	5.4	4.8
Hospitality	4.1	–2.8	–0.1	4.5	8.3	5.2	1.0	0.9	4.9	3.4
Finance	3.8	8.3	5.1	2.7	6.4	8.1	3.4	0.6	0.5	0.8
Business Services	6.4	–2.5	2.7	3.3	6.9	–3.3	5.9	2.0	1.4	2.0
Public Administration	1.6	3.3	2.6	1.0	2.1	0.5	–1.5	3.1	0.9	6.3
Education	2.5	–1.1	0.9	2.4	4.8	2.6	0.4	3.9	3.0	5.4
Health	3.3	4.0	3.1	3.3	6.3	2.5	1.3	1.2	1.3	1.8
Other Services	3.4	8.9	1.2	2.6	7.9	2.3	2.0	13.2	9.1	4.4

CHAPTER 2

ENHANCING PRODUCTIVITY TO SUSTAIN MEDIUM-TERM GROWTH

KEY MESSAGES:

- The Mauritanian private sector lacks the dynamism needed to drive the country's growth process. Formal business creation remains weak, and the few formal firms operating in the country grow at a slower pace than those in peer economies.
- In recent years, formal firms have not become more productive; instead, they have lost competitiveness due to their inability—or unwillingness—to invest in upgrading their productive efficiency.
- There are signs of a costly misallocation of productive resources within the formal private sector, which stifles productivity growth and signals important market inefficiencies.
- Firm capabilities are weak, reflecting a need for policies to enable upgrading by firms.
- Mauritania has a weak competitive environment, characterized by high market concentration and a significant state presence, which contributes to resource misallocation.
- Mauritania has received significant Foreign Direct Investment inflows, but primarily concentrated in the extractive sector, with limited positive spillover effects to the broader economy.
- While Mauritania is relatively open to trade, its positive impact on growth is mitigated by its concentration among extractives and a low openness to trade in services.
- Productivity growth can be boosted by reforms that facilitate or incentivize firm upgrading (including innovation, technology adoption, and workforce skills development), reduce resource misallocation and promote productive entry and exits.

Introduction

Mauritania's sluggish productivity growth highlights the need to address the underlying challenges preventing the country from achieving a more sustained process of growth. As shown in Chapter 1, Mauritania's productivity growth—the key long-term driver of aggregate growth—has underperformed that of its peers, a trend that is particularly evident in the non-agricultural sector. This has been accompanied by poor labor market outcomes, as evidenced by a presently weak labor force participation (LFP), especially for women and the youth, limited job creation and declining job quality. Understanding the causes of this underwhelming productivity performance and implementing effective policies to address them is key to ensure better long-term prospects for the Mauritanian economy.

Firm-level growth has three main drivers, which guide the analysis, subject to data limitations. The first driver is productivity gains within existing firms, which reflects their capacity for innovation, technology sophistication, managerial and business practices, and worker skills. The second driver is the reallocation of labor and capital from less productive to more productive firms. If highly productive firms are not growing, this may indicate that the economy is not allocating resources as efficiently as possible. Finally, the third driver is the exit of less productive firms from the market and the entry of more productive firms to replace them. Conditional on data availability, the analysis in this Chapter provides evidence on the importance of these channels in driving the productivity performance of the Mauritanian private sector and highlights key areas of interventions to strengthen their contribution. Chapter 3 in this report provides additional in-depth insights into the challenges highlighted in the analysis.

Building on the analysis in Chapter 1, this chapter identifies key micro-level obstacles to productivity growth across Mauritanian firms and highlights policy directions to address them. The previous chapter provided an analysis of the historical trends and drivers of Mauritania's aggregate productivity, revealing a pattern of slow growth that lags the country's aspirational peers owing to the stagnation in the non-agricultural sector. This chapter presents a deeper microeconomic analysis into the main drivers of firm-level growth and productivity, which is guided by the three productivity growth channels highlighted in the previous paragraph (Box 2.1). Section A provides an overview of the business demographics, productivity dynamics and decompositions, and evidence on misallocation. Section B examines in more detail the possible factors behind those findings, which are elaborated further in chapter 3.

Box 2.1: Data and definitions used for the analysis in Chapter 2

The analysis in this chapter is mainly based on the following microeconomic data sources:

- *Firm-level balance sheet data.* The firm-level data used for the analysis are based on firms' tax declarations collected by the Tax Administration and elaborated by the statistical office of Mauritania (ANSADE). The data contains standard balance sheet information for formal firms filing tax declarations. While the data contains information on employment and fixed assets, these variables have a substantial share of missing values, effectively preventing an estimation of total factor productivity (TFP). Productivity is thus proxied by value added per worker, where firms' relative number of employees is proxied by firms' relative wage bills.
- *Entrepreneurship database.* The entrepreneurship data includes data with global coverage on registered limited liability companies (LLCs) obtained from local statistical offices and other public administrations.
- *The World Economic Forum (WEF) Global Competitiveness Index (2019).* This data set creates indicators derived from a survey among business executives and are expressed as scores on a 1–7 scale, with 7 being the most desirable outcome. A caveat of such data is that it relies on subjective perceptions of survey respondents. However, similar indicators from other sources are unavailable or outdated for Mauritania, such as the latest World Bank Enterprise Survey, which is from 2014.

A. Lack of Private Sector Dynamism and Market Inefficiencies Constrain the Economy's Growth Potential

Available firm-level data on the formal private sector suggest that the Mauritanian private sector lacks the dynamism needed to drive the country's growth. First, the data show that Mauritania is currently unable to generate enough formal businesses—a key engine of long-term growth and good job creation—to drive its long-term growth process, while the few formal firms active in the country show limited dynamism, growing more slowly than firms in peer economies. Second, formal firms in recent years have not become more productive but have rather lost competitiveness, being unable—or unwilling—to invest in upgrading their productive efficiency. Third, there are signs of a costly misallocation of productive resources in the formal private sector, pointing to the presence of important market inefficiencies that contribute to slowing down growth.

There Are Few Active Formal Firms in Mauritania, and Those That Do Formalize Lack Dynamism

The number of formal businesses in Mauritania remain very low, a sign of substantial barriers to formal business creation. Formal business creation is low in Mauritania, with only 0.4 limited liability companies (LLCs) created per 1,000 adults (Figure 2.1). As a result, the size of the informal economy in Mauritania remains large. As of 2017 over 90 percent of employment was informal (Figure 2.2) and as of 2020 the World Bank estimated the informal economy to account for between 30.5 percent and 32.6 percent of the country's aggregate output.¹⁶ The lack of formal business creation is a sign that the net returns from formalization continue to remain low for most firms and entrepreneurs in the country. Several factors affecting the business environment can lead to this outcome, including legislative hurdles that increase the cost of formalization—such as cumbersome legal business creation procedures—as well as factors—such as those sustaining a weak competitive environment—that reduce growth opportunities for newly created formal business or that increase the uncertainty of their investments. The lack of formal business creation is thus a first sign of important structural issues in the Mauritanian business environment. Chapter 3 in this report provides further insights into some of these factors.

The limited economic participation of women contributes to the low business density in the country, limiting the economy's dynamism. Aspiring female entrepreneurs face an unconducive ecosystem within the formal sector, underscoring gender-based challenges in Mauritania's labor market. As a result, although women make up more than half of Mauritania's population, only 26 percent of the female working-age population participates in the labor market, and just 11 percent of entrepreneurs are female, below most peers (Figure 2.3). This stark underrepresentation of women in the entrepreneurial landscape suggests a significant untapped potential for growth and job creation, which, if harnessed, could contribute to promoting more business creation, while realizing the entrepreneurial and innovative potential of a large share of the population—ultimately contributing to long-term growth.¹⁷ While formal legal barriers usually represent only one of the challenges to women economic participation, the World Bank Women, Business, and the Law database highlights several areas in which legal reforms could promote women entrepreneurship—and women broader economic participation—in Mauritania. In particular, substantial legal asymmetries between men and women persist in asset ownership and access to credit—two key enablers of entrepreneurship.¹⁸

As they age, formal firms in Mauritania expand at a comparatively slow pace—a sign of insufficient business dynamism. After starting their operations, Mauritanian formal firms expand in size, but this process of life-cycle expansion is slow when compared with that observed in more dynamic peer economies. For example, Figure 2.4 shows that formal Mauritanian firms that have been operating for 10 to 14 years are on average only 52 percent

16 Estimates are from the World Bank Informal Economy database based on the methodology described in Elgin et al. (2021).

17 Wodon, de la Brière (2018) for a discussion of the high aggregate cost of gender inequality.

18 Mauritania Economy Snapshot: Women, Business, and the Law 2.0.

Figure 2.1: Mauritania creates less than one LLC per 1,000 adults per year

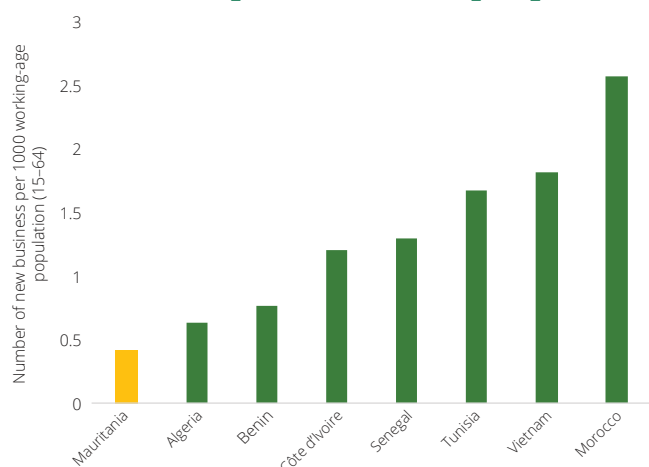
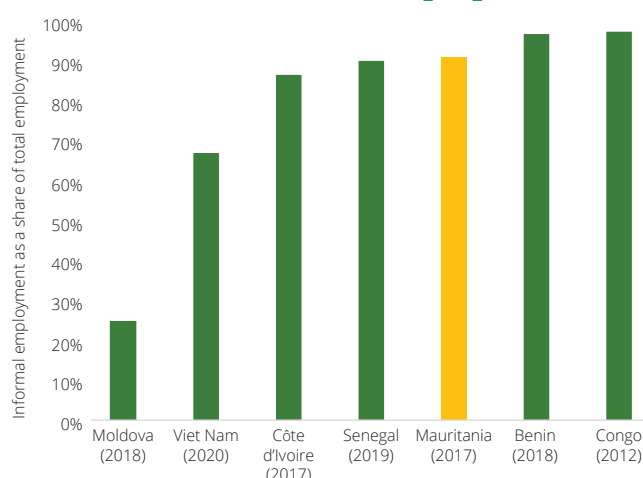


Figure 2.2: Informal employment as a share of total employment



Source: World Bank Entrepreneurship database and World Bank Informality Economy database.

Note: Data from 2022 or the latest available year for each country. World Bank Entrepreneurship data are based on limited liability companies (LLCs) only.

Figure 2.3: The share of female entrepreneurs in Mauritania remains low

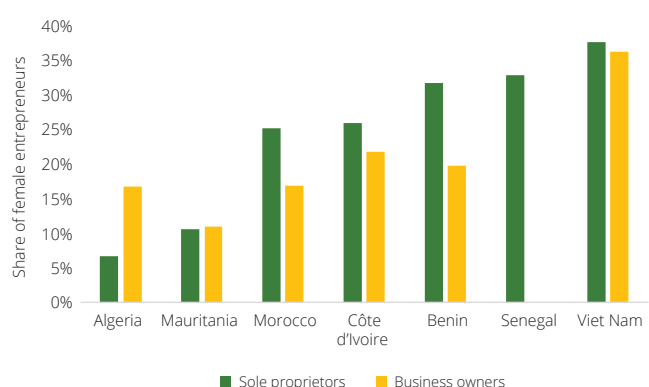
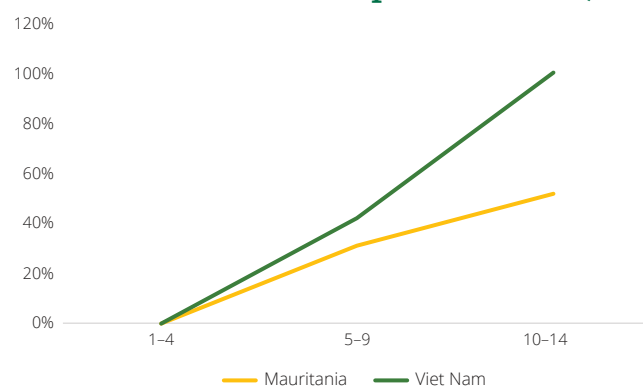


Figure 2.4: Average employment size of firms by age class (percent difference relative to 1-4 years old firms)



Source: World Bank Entrepreneurship Database (left panel), ANSADE firm-level data based on tax records and World Bank PSDD pilot database (right).

larger (in terms of employment) than firms that have been active for 1 to 4 years, a rate of growth that is half of that observed among formal Vietnamese firms (101 percent growth rate). The life-cycle growth rate of firms is an important proxy of business dynamism (WDR 2024). Stronger growth rates among younger and maturing firms are usually a sign of higher reallocation in the economy, itself evidence of stronger competition for markets and consumers—which is, in turn, an important engine of private sector driven growth. The evidence in Figure 2.4 suggests that Mauritanian firms are either unwilling or unable to grow as fast as firms tend to do in more dynamic economies, suggesting that important challenges to firms' growth remain in the country. These challenges can either limit firms' access to the inputs and/or markets needed for growth—for example, access to the finance, technologies, and skills needed to expand and access international markets—or by reducing the incentives that firms have to expand—for example, by protecting market incumbents and market leaders. Evidence from recently available matched employer–employee data among formal firms and their workers (Box 2.2) further suggests that earnings tend to grow more steeply with tenure in larger firms, pointing to potential on-the-job

Box 2.2: Growth and jobs analysis for mauritania: using matched employer-employee data

Firm growth and size affect not only productivity and job creation but also the quality of employment—an essential dimension of economic development. In many developing countries, too many workers earn too little, and pervasive job churning prevents them from moving up the jobs ladder. Evidence from Mauritania supports this pattern: the newly available matched employer-employee data shows that larger firms offer steeper earnings profiles with tenure. Easing barriers to firm expansion—such as limited access to finance and weak competition—can benefit firms while also improving job quality for workers.

Among formal firms, large firms—though relatively few—have played a disproportionate role in job creation in Mauritania, consistently accounting for over half of total employment in the sample.

In contrast, while micro firms dominate number, their total employment contribution has remained steady and low, suggesting a more limited role in formal job creation.¹⁹ The COVID-19 pandemic had a notable impact on the formal sectors, not through widespread job destruction, but through reductions in real earnings and working hours. In 2020, firms across all size categories experienced a decline in earnings. By 2021, earnings in the medium and large firms had rebounded, while micro firms continued to see declining pay levels. This divergence suggests a widening gap in labor market conditions across firm sizes, with micro firms facing greater challenges to recover. In addition, since 2020, a substantial and increasing share of workers within formal firms do not report working full-time (Figure 2.6). This holds regardless of the firm size, suggesting underemployment even within the formal firms.

Earnings growth dynamics differ substantially by firm size, with large firms offering clearer pathways for wage progression.

Compared to smaller firms, large firms exhibit a notably steeper earnings profile, particularly over the first 10 years of tenure, despite offering lower starting wages. This suggests that large firms may provide a “job ladder,” characterized by opportunities for on-the-job learning, career advancement, and greater employment stability—all of which support long-term earnings growth. In contrast, earnings profiles in medium firms remain relatively flat, indicating limited wage progression for workers who stay in these firms. Consistently, workers in large firms start with lower annual wages compared to those in small and medium firms, but their wages grow significantly faster with tenure. Since the dataset does not track workers across firms over time, it is also possible that more productive workers are eventually matched with larger firms, and the observed wage growth reflects better matching. Overall, tenure is positively associated with earnings, with a diminishing rate of return over time.

training and internal career progression in these firms—advantages that smaller firms may lack (Figure 2.5). By limiting firms’ growth, these challenges also limit Mauritanian firms’ ability to tap into economies of scale, further constraining aggregate growth. The more in-depth analysis carried out in Chapter 3 sheds further light on some of the challenges driving this result.

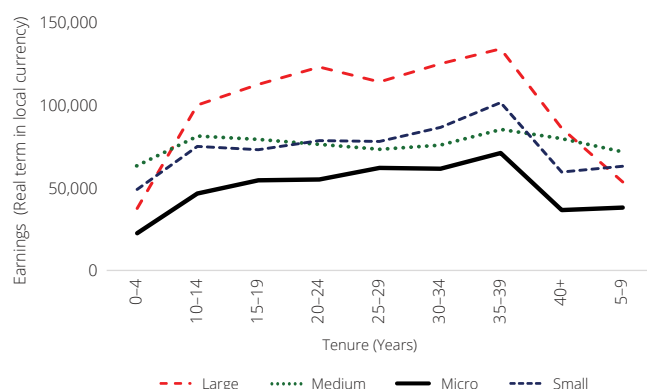
Formal Firms Have Not Become More Productive in Recent Years

In addition to low dynamism, formal Mauritanian firms exhibited declining productivity and have been losing competitiveness in recent years.²⁰ Between 2017 and 2019 the estimated aggregate labor productivity of the formal business sector in Mauritania declined by 9.2 percent, a trend that was driven entirely by a decline in

¹⁹ This pattern should be interpreted with caution, however, as large firms are overrepresented in the dataset.

²⁰ This section uses labor productivity—defined as the log of value added per worker—as a measure of productivity. Due to the poor quality of the employment variable in the firm-level data used for the analysis, the note uses total wages as a proxy for employment. Intrinsically, any measure of productivity has some specific drawbacks in contexts of high informality. In particular, any misreporting of either labor (or wages) or value added (or its components) will generate a bias in the measure of productivity. For example, other things equal, a firm with a higher measured labor productivity is either a firm that is effectively more productive or a firm that is underreporting employment (or wages) relative to its value added. It is important to keep in mind this caveat when interpreting the results of the analysis in this note.

Figure 2.5: Average real earnings by worker tenure and firm size



Source : Caisse Nationale de Sécurité Sociale (CNSS).

Note: Data used in the analysis is from 2017 to 2021. Full-time employment is defined as working 250 or more days in a year. Observations with more than 365 workdays are excluded from the sample (approximately 1% of cases). More details can be found in Li (2025): Growth and jobs analysis for Mauritania: Using matched employer–employee data (Background note).

Figure 2.6: Share of full-time workers by year

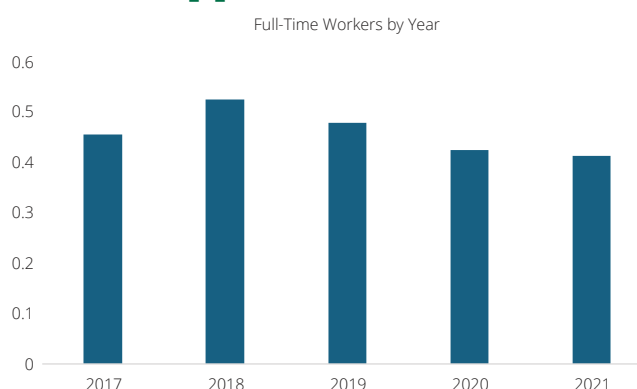
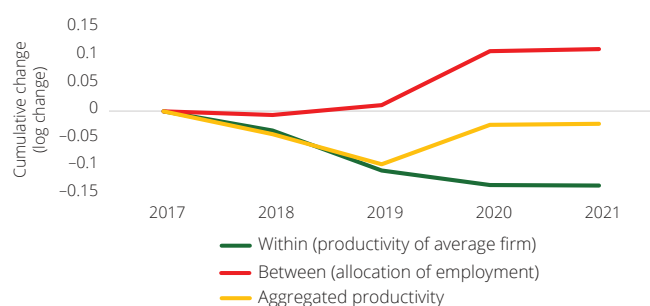


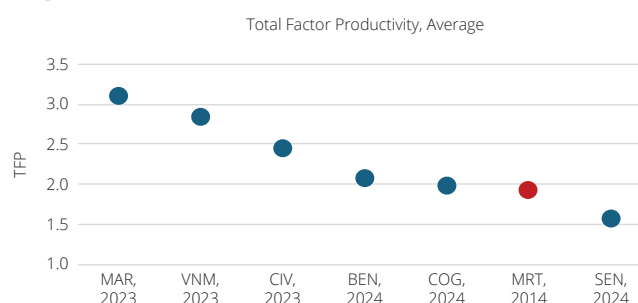
Figure 2.7: Olley-Pakes decomposition of aggregate productivity growth (among two years stayers only)



Source: ANSADE firm-level data based on tax records.

Note: The decomposition is based on two-years stayers only.

Figure 2.8: Total factor productivity



Source: ANSADE firm-level data based on tax records.

the productivity of the average firm (green line, Figure 2.7 and Table 2.1).²¹ Changes in the allocation of employment across firms with different levels of productivity—that is changes in the allocative efficiency of labor—had limited impact on the aggregate productivity of the business sector prior to the COVID-19 pandemic (red line, Figure 2.7).²² Overall, the evidence seems to suggest that formal businesses in Mauritania were unable (or unwilling) to invest in productive efficiency over the pre-Covid-19 period, with negative repercussions for the productivity of the economy in absolute terms and relative to peers (Figure 2.8). Several factors highlighted in this report can have contributed to the underwhelming recent performance of formal businesses in the country, including limited access to skilled labor, weak adoption of digital technologies, and a constraining regulatory environment, as examined in Chapter 3. Addressing these factors and promoting a stronger dynamism in the country's private sector can help revert the trend observed in Figure 2.7 and fuel a stronger process of aggregate productivity growth.

21 The analysis in this section focuses on the pre-Covid period for which data are available. The Covid shock generated strong cyclical dynamics that, due to the different speed of adjustments of employment and sales to cyclical shocks, substantially altering the interpretation of the dynamics of productivity after 2019.

22 Aggregate labor productivity is a combination of the average labor productivity of a firm in the economy and of the allocation of employment across firms with different levels of labor productivity.

Table 2.1: Decomposition of aggregate productivity growth

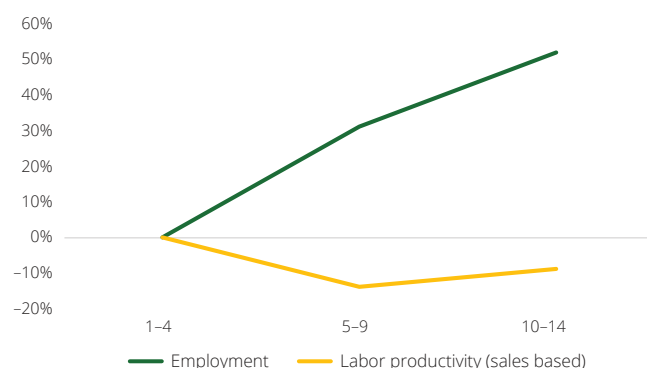
	Mauritania 2018–2022	Vietnam 2015–2020	Moldova 2012–2020	Cameroon 2018–2022
Between	0.11	0.25	–0.09	–0.20
Within	–0.14	–0.13	0.06	0.00
Total	–0.02	0.12	–0.03	–0.20

Source: Private Sector Data Dashboard, World Bank staff calculations.

Note: The table presents the decomposition of labor productivity, measured as value added per worker. Data for Algeria, Benin, Congo, Côte d'Ivoire, Morocco, and Senegal is unavailable in the PSDD dataset.

There Are Signs of a Costly Misallocation of Productive Resources in the Economy

Figure 2.9: Average employment size and productivity of firms by age class



Source: ANSADE firm-level data based on tax records.

As they grow older, Mauritanian formal firms expand in size but also become less efficient—a dynamic that sustains a costly misallocation of productive resources in the economy. Figure 2.9 shows that as firms expand with age (albeit at a slower pace than in peer economies), they also become less productive, on average. These life-cycle dynamics of firms are a direct source of misallocation in the economy as they imply a reallocation of employment from younger, more productive firms towards older, less productive ones. They also signal that markets are not always rewarding the most productive and competitive firms. Instead, older firms seem to be facing declining competitive threats and can, as a result, maintain their market position while having limited incentives to invest in efficiency and upgrading.²³

The relationship between firms' size and productivity shows signs of a misallocation of labor across firms,

which can drag the productivity of the overall economy. More productive Mauritanian firms employ, on average, less (formal) workers than their less productive peers (red line, Figure 2.10). While this could in part be explained by the higher capital intensity of the most productive firms—a hypothesis that remains untested due the lack of reliable information on fixed assets data—evidence suggests that market distortions likely play a role in explaining part of the relationship between firm size and productivity presented in Figure 2.10. As shown in Figure 2.11, the average profit share—a proxy of the capacity of firms to charge prices above their production costs—is increasing with productivity, albeit following an inverted U-shape relationship. This suggests that more productive firms (at least up to the 3rd productivity quintile) are likely to face lower competitive pressure than their less productive peers, a situation that allows them to charge inefficiently high prices and, as a result, reduce their aggregate output and slow their employment growth. In other words, Figure 2.11 hints that more productive firms tend to be inefficiently small for their level of productivity, a sign of costly allocative inefficiency.²⁴ The more in-depth analysis of the business and competitive environment presented in Chapter 3 sheds further light on the possible drivers of these dynamics, clearly showing that market power is indeed an issue that drags down productivity in Mauritania.

23 It is important to note that these patterns are implied from a cross-section of firms and thus do not account for potential cohort specific effects on the average productivity of firms at different ages. The combines age-employment information is available only for 2019 in the firm-level data used for the analysis. It is thus not possible to control for cohort effects in the analysis.

24 The fact that more productive firms are larger in terms of value added does not rule out a misallocation of productive resources in the economy. More productive firms by definition generate more value added for a given amount of resources used, and the green line in Figure 11 largely reflects this mechanical effect. In a dynamic, competitive economy—under standard assumption on the shape of the demand function for the products that firms sell and where firms have similar production functions—we should expect a similar pattern for the orange line, which is not the case.

Figure 2.10: Average size and productivity of firms in each quintile of the productivity distribution

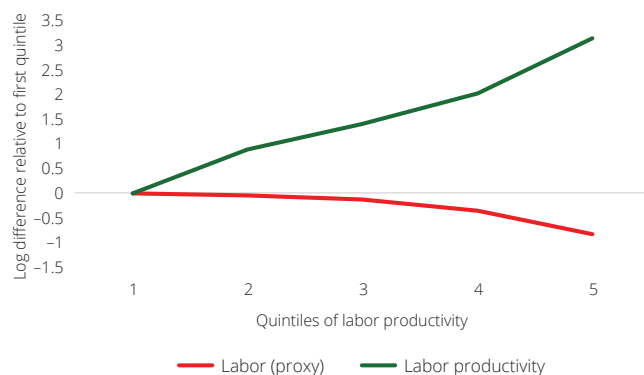
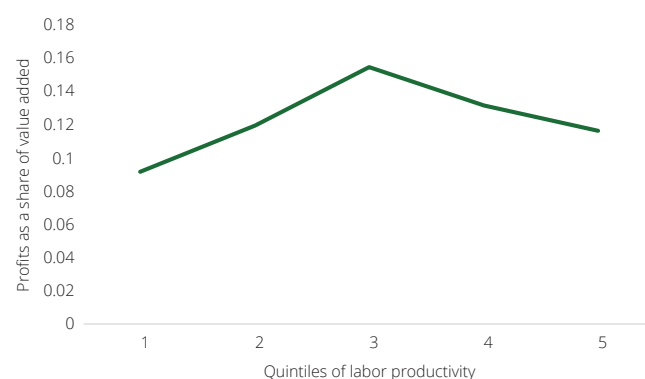


Figure 2.11: Average profit share of firms in each quintile of the productivity distribution

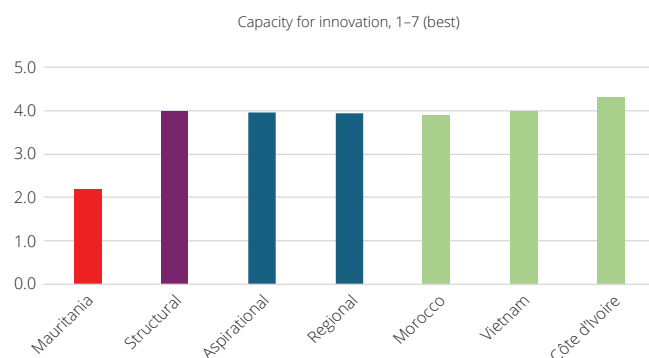


Source: ANSADE firm-level data based on tax records.

B. Enabling and Maintaining Productivity Growth Through Firm Upgrading, Competition, FDI and Trade

This section provides a deeper analysis of the drivers behind the established productivity patterns, which will also be elaborated further in Chapter 3. Section A of this chapter identified micro-level challenges to productivity, focusing on the role of firms and misallocation. This section examines in more detail the possible factors behind those findings. It follows the productivity framework established in the introduction (i.e. within, between and entry-exit firm growth) to the extent possible given the availability of data. It also sets the stage for the even more granular firm-level policy discussion elaborated in Chapter 3, which focuses on the business environment.

Figure 2.12: The capacity for innovation among firms is lowest in Mauritania compared to peers



Source: World Economic Forum (WEF) (2019).

Note: Indicators are derived by the WEF from a survey among business executives and are expressed as scores on a 1-7 scale, with 7 being the most desirable outcome.

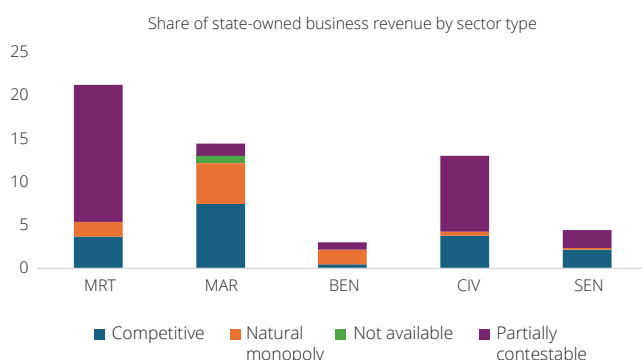
The capabilities of Mauritanian firms are weak, highlighting a need for policies to enable upgrading by firms. Better capabilities within firms, which include technology adoption, innovation capacity, good managerial and business practices, as well as workforce skills, improve productivity and, therefore, firm growth and jobs. However, as discussed, within-firm productivity growth has been negative in Mauritania in recent years, reflecting a need for policies that support upgrading by firms. This is also confirmed by the latest data from the World Economic Forum (WEF) Global Competitiveness Index. For example, Mauritania's capacity for innovation²⁵ is the lowest among all peers (Figure 2.12). Extensive micro data on firm capabilities for a comprehensive analysis is unavailable.²⁶ However, Chapter 3 provides further analysis, including on workforce skills (which are partially discussed) and on digital adoption (which is discussed in greater detail) and which presents a potential growth avenue for Mauritania.

²⁵ Innovation in the current context includes the capacity of Mauritanian firms to absorb and infuse new technology.

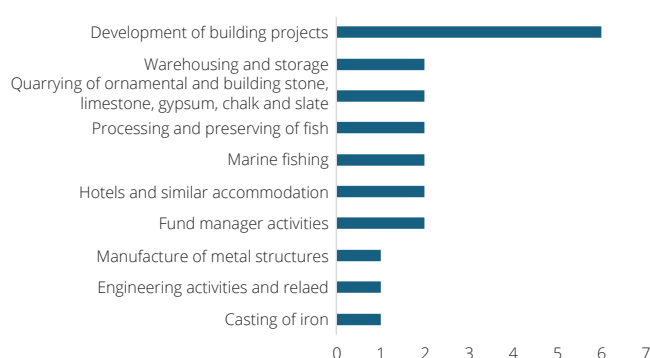
²⁶ For example, the latest WB Enterprise Survey is from 2014 and therefore outdated.

Figure 2.13: State businesses contribute to unfair competition in Mauritania, particularly construction

a. The BOS footprint is large in (partially) competitive sectors



b. Top 10 activities in competitive sectors by number of BOS



Source: World Bank Business of the State (BOS) Dashboard (2019).

Note: The Businesses of the State dataset employs ORBIS data as a starting point and complements it with other data sources and a novel algorithm, as described in the BOS toolkit. The total length of each bar in panel A shows the total revenues from state-owned business as a percent of GDP. This share can be broken down by three categories: natural monopoly (where it is not economically viable for more than one firm to operate, as in some infrastructure sectors), partially contestable sectors (economic sectors characterized by some form of market power, externalities, or other market failures such as under-provision of services, like aviation and banking) or competitive sectors (such as the manufacturing of food products and apparel).

Competition issues are a factor behind the misallocation that is dragging productivity growth, posing the need for urgent competition reforms, as elaborated in background studies and Chapter 3. As discussed in section A, competition is a likely factor contributing to misallocation. This is confirmed by data from the WEF, which shows that Mauritania scores the worst on the extent of market concentration compared to all peers.²⁷ Further, according to a recent World Bank report (World Bank, 2020b), there is a limited number of enterprise groups (around nine) operating in multiple markets and dominating sectors such as imported food (mainly rice and cereals), construction, hotels and banking. Hence, the case for competition reforms is clear and several policy avenues are presented in Chapter 3 and in World Bank (2020b).

A particularly important area for competition reform is that of state-owned businesses, particularly in construction. The Business of the State (BOS)²⁸ in Mauritania represents more than 20 percent of GDP in 2019, significantly higher than all other peers.²⁹ Further, according to the BOS Dashboard (2019) BOS in Mauritania employ a significantly larger proportion of formal employees (18.5 percent) compared to regional peers (average of 8.7 percent), indicating some potential overemployment in SOEs.³⁰ About 85 percent of these BOS are operating in competitive (53 percent) and partially contestable (32 percent) markets (Figure 2.13a), which could be serviced by private firms, thereby creating unfair competition. Among such competitive sectors that do not require public provision, BOS are most prevalent in the development of building projects (Figure 2.13b).

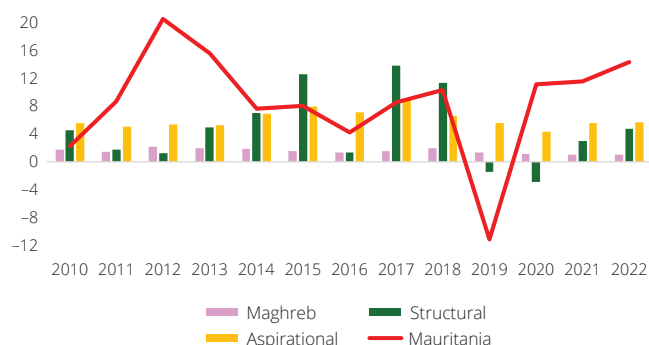
27 Chart omitted here for parsimony but see Chapter 3 for a more detailed analysis on the extent of market dominance and the effectiveness of anti-monopoly policies. This indicator is built by asking executives to describe how corporate activity is spread on a scale of 1 (dominated by a few business groups) to 7 (spread among many firms).

28 An entity is considered as the Business of the State (BOS) for the purpose of the WB BOS database if (i) it is controlled by government units or other public corporations as proxied by participation of 10 percent or more, (ii) it is recognized by the law as a legal entity separated from its owner, (iii) it can generate profits or other financial gains for its owner, and (iv) it is set for the purpose of engaging in market production. Latest available data for Mauritania is 2019.

29 World Bank Business of the State dashboard (here)

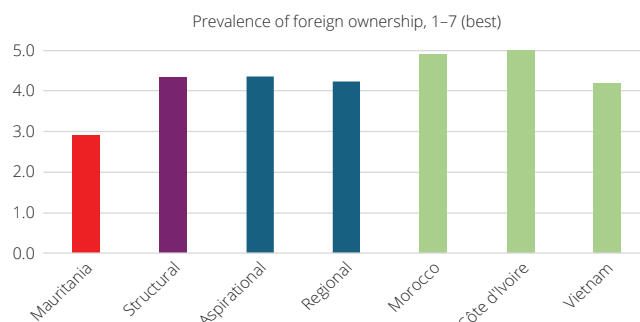
30 This is an average across Angola, Cabo Verde, Cameroon, Comoros, Madagascar, Malawi, Mauritius, Namibia, Sao Tome and Principe and Seychelles. Mauritania has the highest share among all these comparators except Comoros. Chart omitted for parsimony but available here.

Figure 2.14: FDI (net inflows, percent of GDP) have been strong but volatile



Source: WDI.

Figure 2.15: Mauritania has a relatively lower prevalence of foreign ownership among firms



Source: World Economic Forum (WEF) (2019).

Note: Indicators are derived by the WEF from a survey among business executives and are expressed as scores on a 1–7 scale, with 7 being the most desirable outcome.

FDI (including foreign firm entry) has been a significant, yet volatile, source of external financing in Mauritania, and could theoretically boost firm productivity growth and jobs. FDI has been shown to have the potential to boost productivity growth under certain conditions (e.g. Arnold & Javorcik, 2009; Saurav & Kuo, 2020). Between 2000 and 2022, Mauritania witnessed significant FDI inflows (Figure 2.14). In the decade up to 2022, net inflows of FDI averaged 8.1 percent of GDP, which was higher than in the structural (5.5 percent) and aspirational (6.4 percent) peer groups, and much higher than in the Maghreb (1.5 percent). In 2022, Mauritania enjoyed an inflow of US\$1.4 billion and over the decade, the net aggregate inflow came to US\$ 6.3 billion. But small economies with oil and mineral wealth often do relatively well on this measure: The country in the peer groups that did best was the Republic of Congo (10.2 percent) and Georgia (8.4 percent). Further, net FDI inflows were relatively volatile in Mauritania (Figure 2.14), which can pose risks.

However, Mauritania's FDI portfolio is dominated by a few large projects in extractives, with limited evidence of market- and efficiency-seeking inflows, which are key for growth and jobs. Since 2010, the two largest FDI projects have been the Greater Tortue Ahmeyim (GTA) LNG Project and the Kinross Gold Tasiast Mine, alongside two Chinese FDI projects in oil exploration and port expansions. Although these are important for export development and tax revenue, extractive FDI has very limited productivity spillovers, is capital intensive, and generates few employment opportunities for Mauritians. Many of the few jobs created are filled by foreign workers, and direct employment opportunities are expected to decline once the projects become operational. Conversely, non-extractive FDI has been few and small in scale, with only four projects per year approved between 2014 and 2023.³¹ As a result, the prevalence of foreign owned firms in Mauritania is lower than in all peers (Figure 2.15).

Hence, Mauritania's current FDI mix is insufficient to generate meaningful firm growth and jobs, posing the need for shift in FDI and investment climate policy. A key channel through which FDI can stimulate growth is by creating linkages to domestic firms to improve their within-firm productivity or by providing competitive pressure that improves between-firm growth or the entry-exit channel of growth (e.g. Arnold & Javorcik, 2009; Saurav & Kuo, 2020). This in turn generates positive spillover effects by facilitating or incentivizing domestic firm upgrading (including technology transfer), better resource allocation, or the exit of inefficient firms. With extractive FDI, these channels are largely missing as there are limited linkages to the domestic market, since resources are simply mainly being extracted and exported. There is also limited job creation, due to its capital-intensive nature. Hence, Mauritania's current FDI mix is insufficient to generate meaningful spillover effects on growth or jobs. This suggests the need for its FDI attraction policy to consider increasing the focus on non-extractive FDI as well, while creating a business and investment climate conducive to non-extractive FDI, which is further elaborated in Chapter 3.

31 In 2023, four foreign majority-owned projects were limited to ice cream making, hotels, and agricultural production and directly employing 195 people. However, 2022 saw a better performance, with twelve projects across agriculture (five), livestock (four), tourism (one), fishing boats (one), and quarry equipment (one), generating nearly 700 direct jobs and over 2,700 indirect jobs. In 2021, APIM approved four projects, including a tourism complex, a fish processing plant, a nail-making center, and a tannery, which collectively created 300 direct jobs.

Figure 2.16: Trade openness is relatively high compared to peers

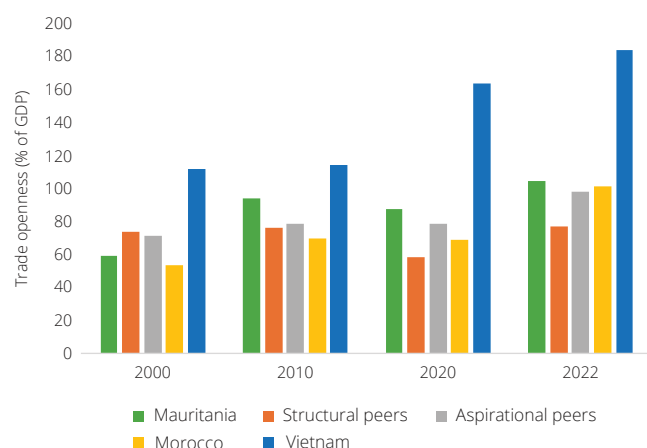
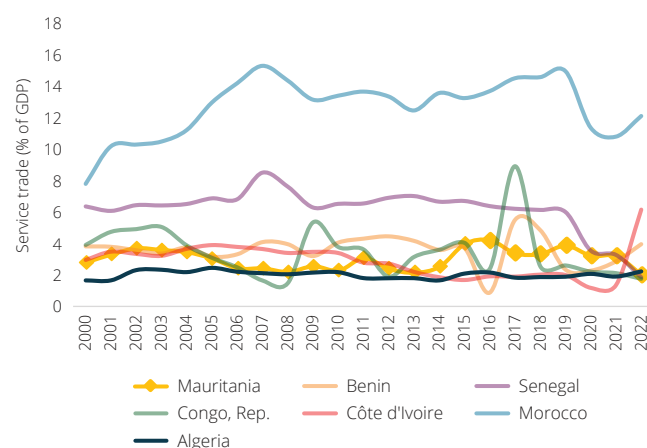


Figure 2.17: The openness to services trade is low



Source: World Development Indicators and Macro Poverty Outlook.

Mauritania is relatively open to trade, but trade is concentrated among extractives (see chapter 1) and is not contributing to growth, reflecting the need for comprehensive reforms. Trade can boost productivity growth through all channels. Trade can expand market size and demand for firms, which typically constrains firm growth in developing countries. Trade as a share of GDP in Mauritania almost doubled over the last two decades from 58 percent of GDP in 2000 to 103 percent of GDP in 2022 and outperforms most peers (Figure 2.16). However, minerals and stones account for more than two-thirds of exports, while fishing represents almost one quarter (Harvard Growth Lab, 2025).³² As a result, the complexity of trade is low and net exports contributed negatively to growth since 2020 (WB WDI and IMF BOPS, 2025).³³ Compared to peers, Mauritania is particularly lagging in services trade (Figure 2.17), which could provide one possible avenue for trade diversification. Hence, comprehensive reforms to increase the contribution of trade to growth and jobs are warranted. This may include improving the competitiveness of domestic firms through productivity improvements, as discussed throughout the chapter. Further, an improved business environment, better market connectivity through improved logistics and trade policy can play an important role, as elaborated in Chapter 3.

For Mauritania to reap the potential trade-related benefits from increased digitalization, a reduction in services trade restrictions and better digital connectivity are crucial. Digital penetration is improving globally and (digital) services offer an opportunity to promote (export) diversification, as discussed in Chapter 3. However, important regulatory restrictions still exist to services trade in Mauritania, as shown by the Services Trade Restrictiveness Index (STRI). The STRI ranks restriction on a scale of 0 to 100 and Mauritania has a score of 64 on mode 1 of services trade, which relates to digital trade (Figure 2.18). A deeper analysis of the STRI in further work can provide more detailed and actionable policy recommendations. Further, digital connectivity is a pre-condition for services trade through remote (digital) delivery. However, Mauritania is ranked 131 out of 134 countries in digital readiness (Figure 2.19).

³² The chart is omitted for parsimony and can be found in the country scan. The latest data available for Mauritania is 2021.

³³ The chart is omitted for parsimony and can be found in the country scan.

Figure 2.18: Service trade restriction index shows room for improvement

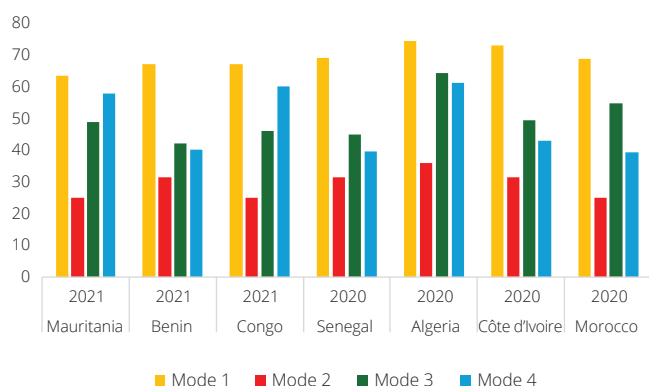
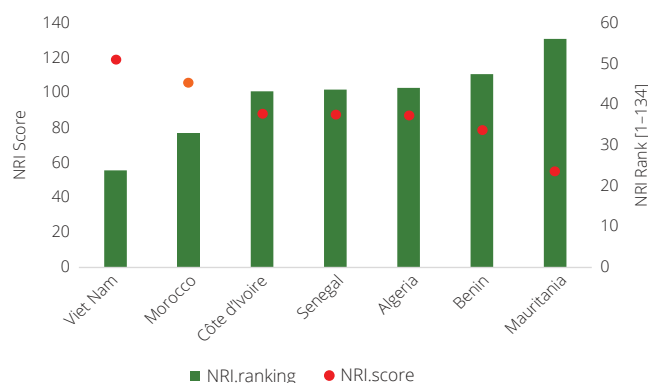


Figure 2.19: The Network Readiness Indicator reveals significant gaps in digital connectivity



Source: WB-WTO Services Trade Policy Database³⁴ (panel a) and Network Readiness Index, 2023 (panel b).

Note: This Network Readiness Indicator covers various related dimensions, including technology infrastructure, digital skills, and the impact of digital transformation on economic and social aspects. The Network Readiness Indicator consists of many sub-indicators covering issues such as the level of software expenditures, digital inclusion, as well as the trust, which matter for a country's digital 'eco-system'. The measure assesses a country's digital connectivity, i.e., its ability to supply digitally deliverable services over digital networks, or more simply the Internet, which captures the sophistication of a country's digital infrastructure and the framework in which information and communication technology (ICT) solutions are developed. A higher score indicates better performance.

Overall, this chapter shows that productivity growth can be boosted through a multi-pronged, concerted reform effort, while taking into account the country's implementation capacity. In particular, reforms should aim to: (i) facilitate the creation and formalization of more businesses (See chapter 3 for business enabling reforms); (ii) strengthen the competitive environment, including enforcing the new competition law; (iii) enhance innovation capacity by boosting human capital, vocational training and technology transfer; and (iv) improve access to inputs and markets through tariff reforms and enhanced connectivity.

34 The STRI ranges from 0 to 100, where 0 indicates that none of the restrictions underlying the index is applied, and 100 means that the subsector/mode is completely closed to foreign services and service suppliers. Trade in services is defined as the supply of a service through various modes:

Mode 1: Cross-border supply of services, i.e. from the territory of one country into the territory of another country

Mode 2: Consumption abroad, i.e. in the territory of one country to the consumers of another country

Mode 3: Commercial presence, i.e. by a service supplier of one country through establishment in the territory of another country

Mode 4: Presence of natural persons, i.e. by a service supplier of one country through presence of natural persons in the territory of another country Consumption abroad (mode 2) is only covered for health services due to the existence of sector-specific restrictions for this mode of supply. However, the STRI on cross-border supply (mode 1) also includes measures that apply directly to the consumer, such as the ability to make cross-border payments

CHAPTER 3

DIVERSIFYING BUSINESS OPPORTUNITIES FOR HIGHER GROWTH AND EMPLOYMENT

KEY MESSAGES:

- Mauritania's business environment is uncondusive to entrepreneurship and private investment. This has contributed to weak growth, limited and quality-poor job creation and low labor productivity in the non-extractive private sector.
- Gaps and inefficiencies in regulatory quality, land administration, labor market rules, tax administration, trade and logistics, competition policy and contract enforcement highlight the need for reforms to enhance the business climate and stimulate private sector development.
- Even though Mauritania is lagging in digital development, the rapid expansion of mobile internet penetration signals this may be about to change.
- This presents an opportunity to leverage digital technologies to transform business models and consumer services, and to align with regional trends in terms of digital innovation.
- To transition towards a more diversified private sector-led economy, Mauritania should prioritize broad-based reforms aimed at fostering a level playing field for investments beyond the extractive sectors.

Introduction

Mauritania's economic growth and employment prospects are severely limited by a lack of diversification and stagnant productivity (see Chapters 1 and Chapter 2). The lack of economic diversification mainly reflects the concentration of foreign direct investment (FDI) in the extractive sector with very limited spillover effects to domestic firms. This has resulted in a lack of productive employment opportunities for its rapidly growing population (see Chapter 1). Chapter 2 shows that to boost productivity growth, Mauritania can incentivize firm upgrading (including through innovation), reduce resources misallocation and foster competition. A vibrant and supportive business climate can act as a catalyst for the diversification of economic opportunities and the enhancement of productivity growth, driving sustainable development and fostering resilience in the economy (World Bank, 2021).³⁵ Likewise, advancing the digital economy can diversify economic opportunities and boost productivity by enabling innovation, improving market access, and streamlining business operations (World Bank, 2022).³⁶

This chapter outlines policy priorities to foster an investment-friendly business climate and to advance the digital economy with the view of developing the non-extractive private sector and increase productivity growth. The chapter is divided into two main sections: The first focuses on Mauritania's business environment in Mauritania, highlighting key legal and regulatory obstacles faced by firms, alongside challenges related to access to skilled labor force, access to land, trade and logistics, competition, the burden of taxation and contract enforcement. The second section examines the evolution of Mauritania's digital economy, exploring challenges and opportunities for its development (Box 3.1).

Box 3.1: Data challenges and validation efforts for Mauritania's business environment analysis

A key challenge in analyzing Mauritania's business enabling environment is the lack of recent data. For example, the most recent Enterprise Survey in Mauritania dates to 2014. To address data challenges, the analysis incorporates supplementary sources, including the World Bank's World Development Indicators and the World Economic Forum and relies on extensive background analytical work covering business climate, competition, technology adoption and digital business development. Moreover, to validate the insights derived from these various sources, a field mission was conducted in Nouakchott in 2024. During this mission, consultations were held with representatives from the private sector (including various organizations representing different industries) and public sector agencies responsible for implementing business regulations. These discussions confirmed the persistence of many business climate challenges initially identified in the data.

A. Strengthening the Business Enabling Environment

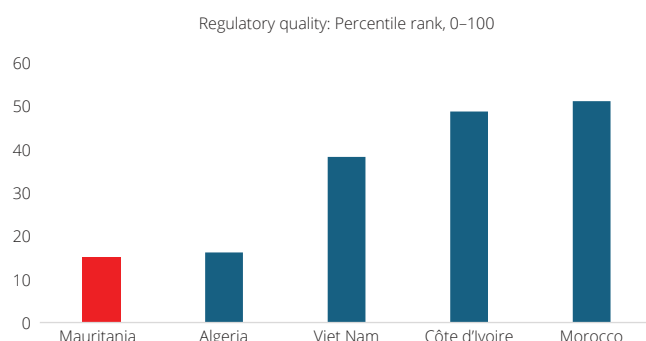
Improving the business environment is a cornerstone of Mauritania's economic development agenda, spearheaded by the High Investment Council of Mauritania. Implementing the 2023–2025 Roadmap for Improving the Business Climate is key to this agenda.³⁷ As emphasized in the roadmap, strengthening the business regulatory environment to support private sector development and investment is crucial for Mauritania to achieve private sector-driven growth, attract non-extractive sector investors and accelerate economic diversification and transformation.

35 World Bank.2021. Côte d'Ivoire Country Economic Memorandum: Sustaining the Growth Momentum. Washington, D.C. : World Bank Group.

36 World Bank.2022. Philippines Economic Update: Strengthening the Digital Economy to Boost Domestic Recovery. Washington, D.C.: World Bank Group

37 <https://apim.gov.mr/wp-content/uploads/2023/10/CSIM-RFUR-FR.pdf>

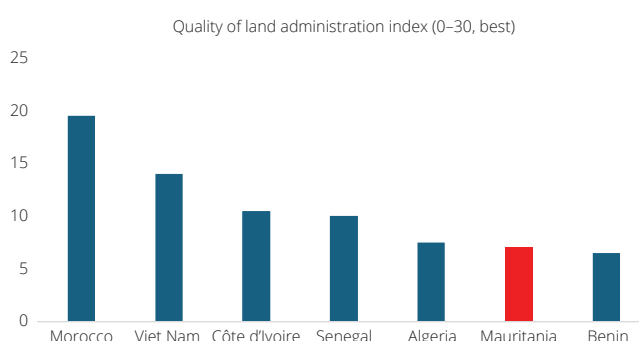
Figure 3.1: The regulatory quality is lower in Mauritania compared to peers



Source: World Development Indicators.

Note: The latest available data is from 2023.

Figure 3.2: The quality of land administration is low in Mauritania



Source: World Development Indicators.

Note: The latest available data is from 2019.

The legal and regulatory environment is weak and presents significant barriers to entrepreneurship and private investment. Evidence of this is that Mauritania lags all its peers in terms of regulatory quality (Figure 3.1). Key issues include cumbersome access to land, inadequate labor rules and skills, redundant processes and discretionary tax procedures, manual and opaque procedures in the government-to-business (G2B) interface, limited competition in the formal sector, unpredictable resolution of commercial disputes, and lack of consistent and transparent information for the private sector.

The quality of land administration in Mauritania lags behind international standards and peer countries due to limited digitalization, poor transparency, insufficient geographic coverage and overlapping customary and modern processes (Figure 3.2).³⁸ While digitalization can significantly enhance the efficiency of land transactions, Mauritania currently lacks an electronic land registration and a geographic information system, with its land registry and mapping agency depending on paper-based systems. Although efforts are underway to implement an electronic land management information system, this is not yet operational. Transparency of land information and geographic coverage are both minimal, with the registry encompassing only a small portion of the country. Finally, customary land acquisition processes coexist with modern ones, creating duplication, uncertainty, and frequent and lengthy land disputes, which can last up to three years. These issues underscore the need to establish clear regulations, robust identity verification mechanisms and explicit guidelines on electronic transactions, such as electronic signatures.

Mauritania's businesses face significant challenges to access skilled labor, as evidenced by survey data.³⁹

Notably, between 42.3 percent and 63.4 percent of firms cite inadequate workforce skills as an obstacle to growth, leading to increased reliance on immigrant labor from neighboring countries such as Senegal. This partly reflects the lack of a functioning labor market information system (LMIS) to help overcome information asymmetries, match supply and demand for labor, and help policy makers and other stakeholders to make informed decisions about labor market policy. These challenges are particularly acute for large and innovative firms (see Chapter 2).⁴⁰ Moreover, skills shortages faced by firms are pervasive across all sectors, firm sizes, and regions, with the trade, construction, industrial, and service sectors in Nouakchott being the most affected.

The skills gap is driven by partly poor educational attainment of the workforce, exacerbated by limited provision of on-the-job training by employers. Despite near-universal primary school enrollment, the proportion of the labor force with middle- and high-level skills remains low. Technical and vocational education and training (TVET) programs are underdeveloped, accounting for 10 percent of all post-basic education enrolments.⁴¹

38 Based on consultations with land and cadastral agencies during a World Bank mission to Mauritania in 2024.

39 Two surveys conducted by Youth Employability Project (PEJ) in August 2022, on the needs of businesses in the formal and informal sectors. The surveys were performed in Nouakchott (including its three wilayas/governorates), and in selected wilayas/governorates in the country (Guidimakha, Trarza, Assaba, Hodh El Gharbi, Hodh El Chargui).

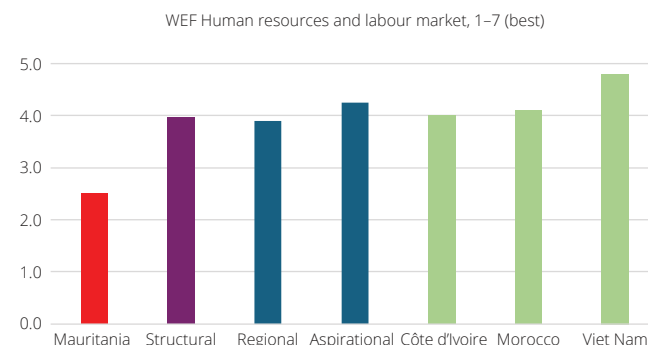
40 World Bank. 2023. "How to Improve Technical and Vocational Education and Training for Youth."

41 Based on consultations with business leaders during World Bank field mission to Mauritania in April 2024.

Figure 3.3: The extent of staff training is lower in Mauritania than in peer countries



Figure 3.4: Mauritania's human resources and labor market quality is below comparators



Source: World Economic Forum.

Note: The latest available data is from 2019.

Additionally, on-the-job learning opportunities are scarce, with few companies investing in training their employees (see Figure 3.3). While the Ministry of Higher Education and Scientific Research has adopted a policy in favor of investment in TVET programs,⁴² these need to better align with private sector needs.

An outdated and inefficient labor market regulatory framework further constrains access to skilled labor.

The quality of labor market rules and practices is below that of peers (Figure 3.4). Key issues include discretionary rules, unpredictable compensation for dismissals, outdated employer requirements and cumbersome procedures to foreign workers due to complex permit and authorization requirements (Figure 3.5). Additionally, occupational safety and health legislation lacks sufficient detail to ensure worker safety. These issues are partly due to an outdated labor market regulatory framework, including the 2004 Labor Code and the 1974 Collective Convention of Mauritania, which should be revised and better aligned with international practices.

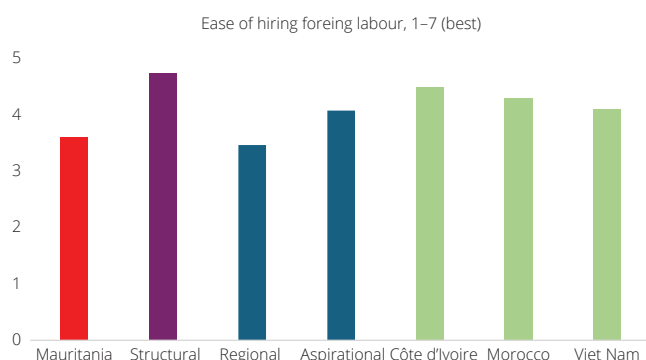
The tax system in Mauritania is particularly burdensome for businesses. Complying with tax requirements is expensive and businesses face a heavy tax burden relative to their commercial profits compared to peer countries (Figure 3.6). Notably, Mauritania is one of the few countries in the world where companies are required to pay taxes even when they incur losses due to a minimum tax of 2 percent on turnover. While the minimum tax on the turnover was modified in 2019, it became one of the minimum options in the corporate income tax framework. This provision incentivizes businesses to underreport their activities and maintain informal operations alongside formal ones, ultimately eroding the tax base and discouraging entrepreneurship.

The Mauritanian government has undertaken measures to streamline the tax administration, but challenges remain. As of 2019, the quality of tax regulations lagged peer countries, underscoring the need to better align existing frameworks with international best practices to strengthen transparency and fairness (Figure 3.7). In 2023, the Tax Office introduced an online tax return and payment system, requiring large companies to file and pay tax electronically, starting January 2024. However, the platform's functionality is currently limited, operating effectively only for wage taxes and not for other taxes such as value-added tax (VAT). Tax accounting firms face challenges, as they must validate payments with banks and occasionally visit the Tax Office in person. The general tax code lacks provisions to ensure equal rights for taxpayers, such as the obligation for the tax administration to provide written responses to taxpayer inquiries. Additionally, there are no safeguards for taxpayers during audits, and temporary payments made during audits cannot be reimbursed. Business leaders report that the tax administration is incentivized to prioritize revenue collection through audits rather than fostering voluntary compliance.⁴³

42 A law on vocational training was adopted in 2018 (Law No 18-038) and sets clear rules for the governance and funding of vocational training in Mauritania, establishes a national quality framework and introduces apprenticeship training and dual training.

43 Based on consultations with business leaders during World Bank field mission to Mauritania in April 2024.

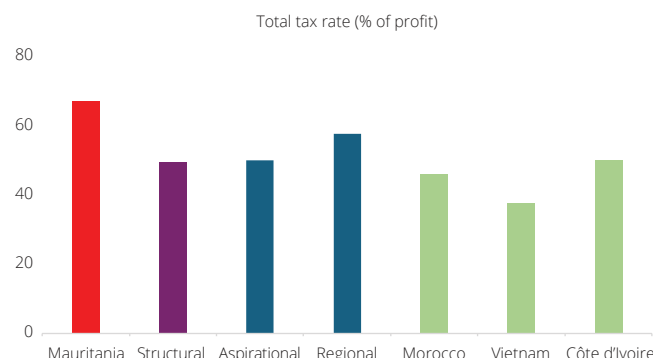
Figure 3.5: Hiring foreign labor is more complex than in peer countries



Source: World Economic Forum.

Note: The latest available data is from 2019.

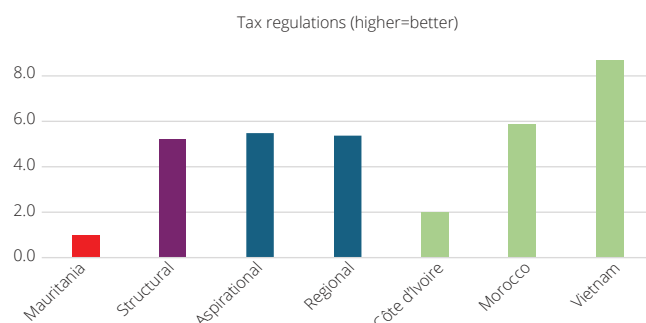
Figure 3.6: Mauritanian businesses face a heavy tax burden compared to peers



Source: World Development Indicators.

Note: The latest available data is from 2020.

Figure 3.7: The quality of tax regulations in Mauritania is way behind that of peer countries



Source: World Economic Forum.

Note: The latest available data is from 2019.

Obtaining VAT refunds is especially challenging, according to businesses.⁴⁴ Restrictions on access to VAT cash refunds and delays in processing refunds create substantial cash flow challenges for the private sector. The refund process is hindered by paper-based submissions and across-the-board verification of all claims, leading to sizable backlogs and distorting cashflows. Delays especially affect exporters and result in arrears to domestic suppliers. Small and medium-sized enterprises (SMEs) face additional hurdles, as they must demonstrate that they are on the verge of closing their business or of losing VAT eligibility to qualify for a cash refund, which triggers a tax audit. To address these issues, reforms such as amending VAT refund rules, implementing an electronic filing and verification system for refund claims, and adopting a risk-based approach to verify VAT refund requests would significantly improve the VAT refund process for firms.

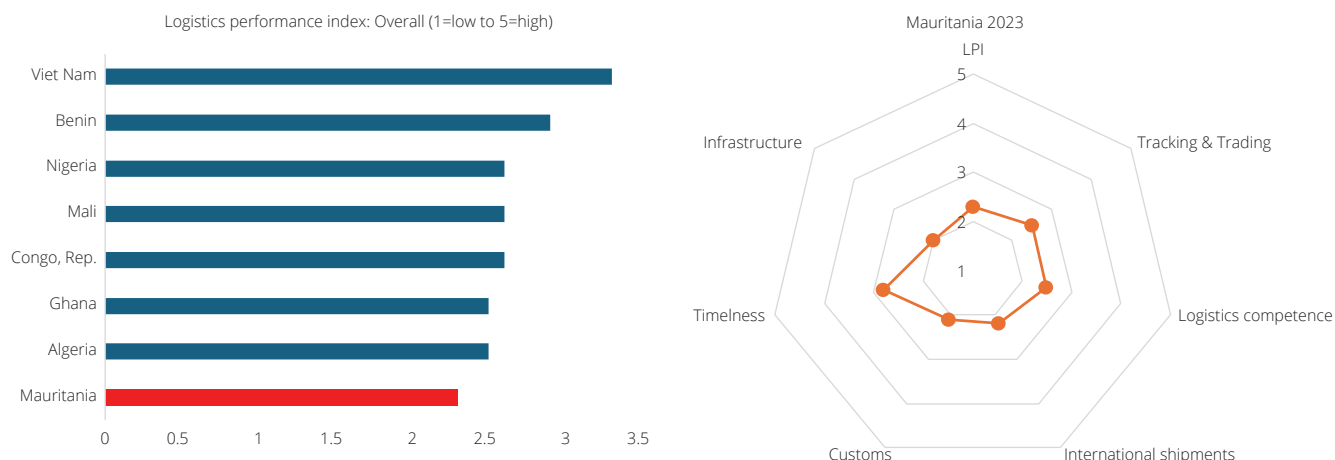
Businesses also face significant trade and logistics challenges, as evidenced by inefficient customs and port procedures. In 2023, Mauritania ranked 123rd out of 139 economies on the World Bank's Logistics Performance Index (LPI) (Figure 3.8), reflecting poor performance in infrastructure and customs clearance. In turn, overly restrictive trade and customs regulations coupled with port inefficiencies discourage trade activities among Mauritanian companies.⁴⁵

Port inefficiencies undermine Mauritania's competitiveness relative to neighboring ports, highlighting a need for enhancing port infrastructure. Despite its small container market, Mauritania attracts major shipping lines and regional specialists that provide feeder services through slot charter agreements. Nonetheless, container port traffic remains low compared to its peers (Figure 3.9), resulting in delays and high costs that hinder trade activities. In particular, limited maritime traffic and reduced competition among shipping lines contribute to elevated sea freight rates. Despite these challenges, the government aims to transform the Port of Nouadhibou into a major port hub on the West Africa coast supporting key sectors such as fishing, mining, oil and green energy projects. To achieve this, boosting efficiency in both the ports of Nouadhibou as well as Nouakchott through infrastructure improvements is a key priority (Figure 3.10).

44 Based on World Development Indicators and consultations with business leaders during World Bank field mission to Mauritania in April 2024.

45 Based on consultations with business leaders during World Bank field mission to Mauritania in April 2024.

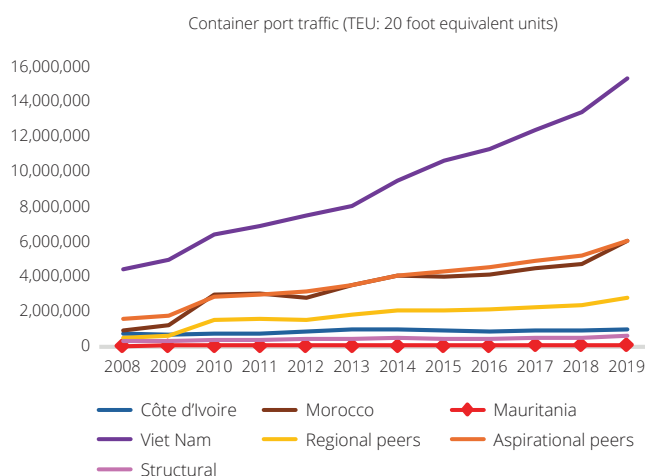
Figure 3.8: Mauritania's weak logistics performance



Source: World Bank.

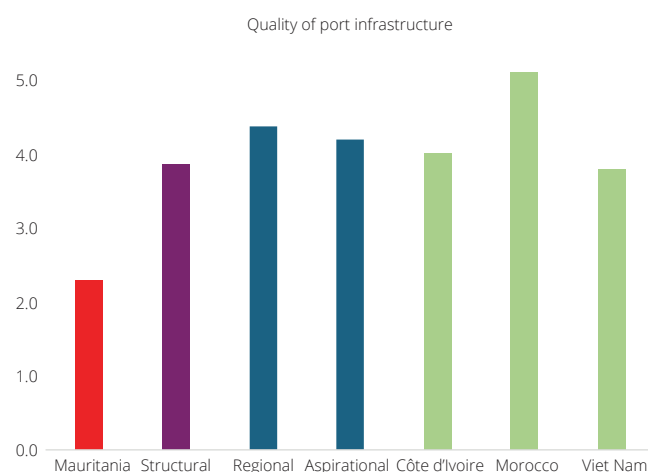
Note: Côte d'Ivoire, Morocco, and Senegal were not included in LPI 2023.

Figure 3.9: Container port traffic in Mauritania suffers from inefficiencies



Source: World Development Indicators.

Figure 3.10: The quality of port infrastructure is well behind peers



Source: World Economic Forum.

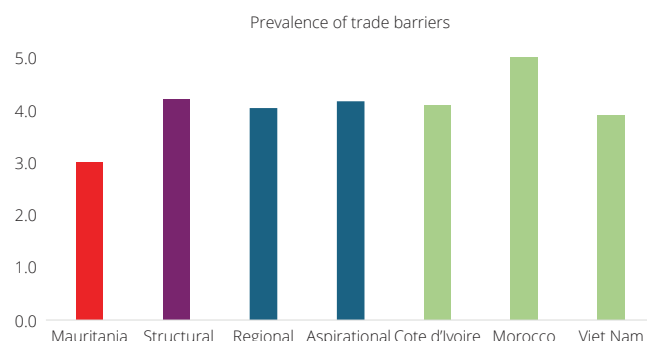
Note: The latest available data is from 2019.

Non-tariff trade barriers (Figure 3.11), cumbersome regulation, and import and export restrictions increase trade costs and constrain export diversification in Mauritania compared to peers (see also Chapter 2). Non-tariff barriers are prevalent, especially in the agriculture sector. Moreover, businesses face burdensome and costly documentation requirements for import and exports activities. For instance, the cost of documentary compliance amounts to US\$400—considerably higher than in peer countries (Figure 3.12). Complex phytosanitary inspection and certification procedures, characterized by fragmented services and poor inter-institutional coordination, can add delays and discourage businesses' trading activities. Streamlining these processes, for example by enhancing on-site inspections and enabling products to be sealed at the same location as they are inspected, would yield efficiency gains.

While Mauritania has made progress in digitalizing customs processes, room for improvement remains. In the UN Global Survey on Digital and Sustainable Trade Facilitation conducted in 2023, Mauritania scored 33.3/100 on cross-border paperless trade—the lowest among surveyed countries (Figure 3.13).⁴⁶ Although the Sydonia

46 <https://www.untfsurvey.org/economy?id=MRT>

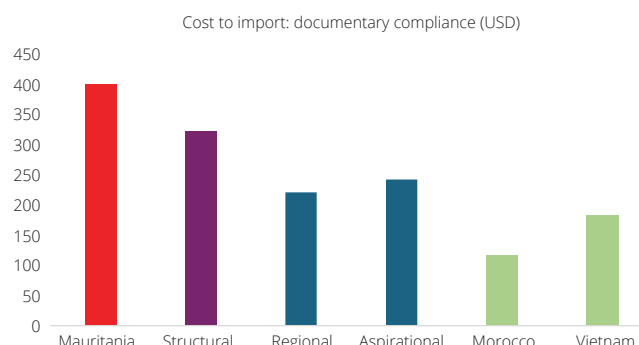
Figure 3.11: Trade barriers are higher in Mauritania than in other economies



Source: World Bank's Doing Business.

Note: The latest available data is from 2020.

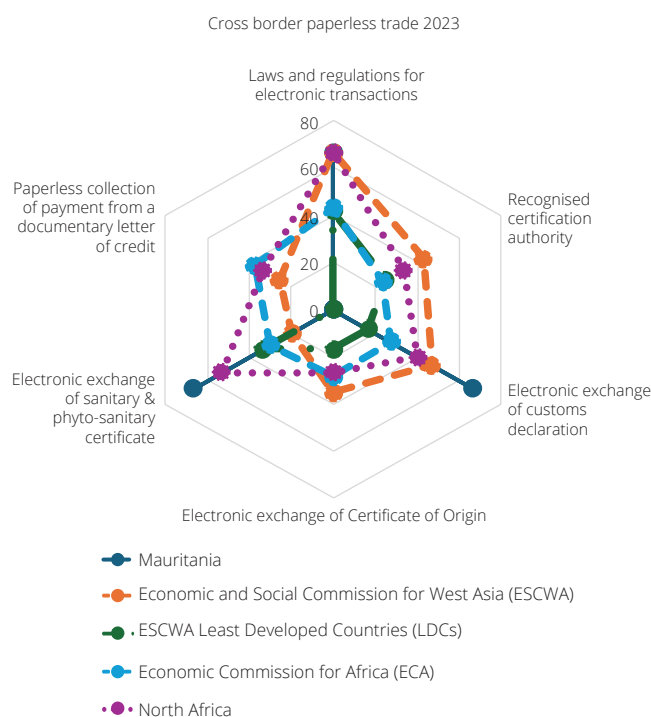
Figure 3.12: The unnecessarily high cost of documentary compliance for imports



Source: World Economic Forum.

Note: The latest available data is from 2019.

Figure 3.13: Trade procedures are still mostly paper-based



Source: UN Global Survey on Digital and Sustainable Trade Facilitation (2023).

World system, a web-based customs management system adopted by Mauritania in 2017 enables electronic filing for customs clearance, physical visits are still required to complete the validation process, which involves collecting up to a dozen signatures on paper documents. Additionally, electronic payment options for imports and exports remain limited. Full digitalization of the customs clearance process could drastically increase efficiency and improve transparency for businesses.

Mauritania has signed and ratified the African Continental Free Trade Area (AfCFTA), but implementation is critical for traders and consumers to fully realize its benefits. To leverage the agreement, Mauritania will need to prepare an offer of tariff commitments and identify actual or potential export products for which it can negotiate accelerated tariff reductions in other members' markets. Additionally, the country needs to assess existing regulatory challenges on trade in services and investment to be negotiated under AfCFTA.

Firm-level competition in Mauritania is limited. Key markets are dominated by fewer than a dozen large industrial and commercial groups, resulting in oligopolistic structures and common anti-competitive practices (Figure 3.14).⁴⁷ In turn, the concentration of market power hinders private sector development and economic diversification, as thoroughly examined

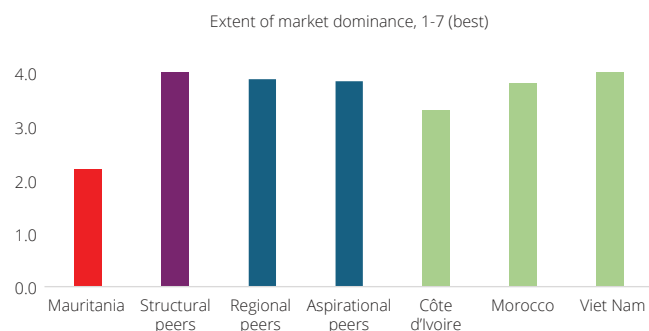
in the 2020 World Bank policy note on *The Role of Competition Policy for a Diversified Economy in Mauritania* and in Chapter 2.

The new Competition Law⁴⁸ adopted in October 2023, if fully implemented, is expected to improve competition oversight and combat anti-competitive behavior. Currently, institutional arrangements between agencies

47 World Bank, 2020b.

48 Loi No 023/PR portant sur la concurrence et les prix.

Figure 3.14: The economy is dominated by a few large industrial and commercial groups



Source: World Economic Forum.

Note: The latest available data is from 2019.

Figure 3.15: Anti-monopoly policies are less effective in Mauritania than in its peer economies

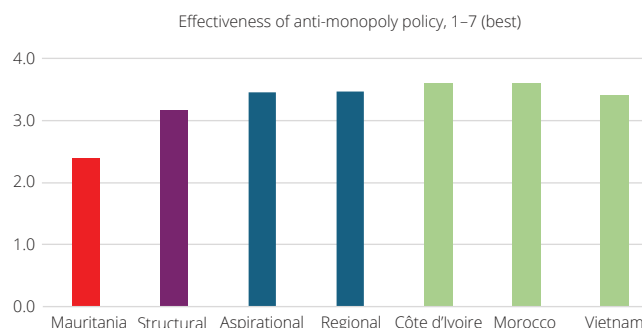
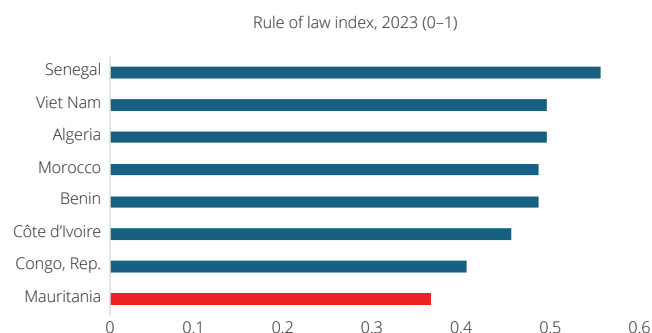
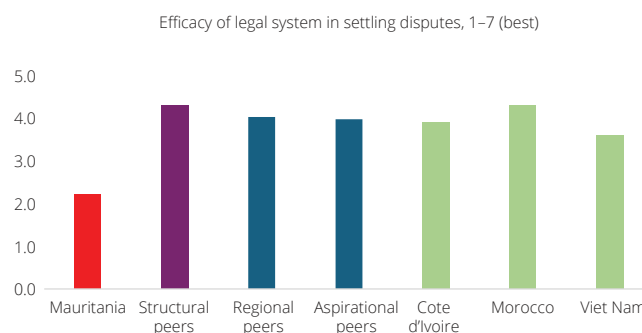


Figure 3.16: Mauritania's Rule of Law index is one of the lowest in the world



Source: World Justice Project 2023.

Figure 3.17: The Mauritanian judicial system is inefficient in settling disputes



Source: World Economic Forum.

Note: The latest available data is from 2019.

with competition powers overlap, and resources to combat anti-competitive behavior are limited. Multiple agencies share responsibility for competition oversight, including the Directorate of Competition, Consumer Protection, and Fraud Repression within the Ministry of Commerce, the Market Surveillance Committee, and the Multisectoral Regulatory Authority. This dispersion of institutional responsibilities has not contributed to an independent and efficient implementation of competition rules (Figure 3.15). The new Competition Law establishes a competition council tasked to oversee competition issues, including taking decisions on cases of competition law infringement. However, the council is not operational yet as its president and members have not been appointed.

The rule of law is generally perceived as particularly weak and the enforcement of contracts as limited. According to the World Justice Project, Mauritania ranked 133rd out of 142 countries in terms of the rule of law in 2023⁴⁹—the lowest index score among peer countries (Figure 3.16).⁵⁰ This reflects limited investor confidence in the quality of contract enforcement, property rights and judicial courts.

Mauritania's judicial system is perceived as risky by investors, due to inefficiencies in enforcing court decisions and lack of transparency. Enforcement of court decisions is often lengthy, unpredictable and, in some cases, nearly impossible (Figure 3.17) due cumbersome appeal and suspension procedures. These challenges stem partly from provisions in the Code of Civil, Commercial, and Administrative Procedures that allow for multiple

49 <https://worldjusticeproject.org/rule-of-law-index/country/2023/Mauritania>

50 World Justice Project 2023.

types of enforcement suspensions. For instance, Article 206 of the Code grants the Supreme Court the authority to suspend the execution of a decision.⁵¹ While alternative dispute resolution mechanisms, such as arbitration and mediation, have been introduced, their adoption by the private sector remains limited. Finally, the judicial system lacks transparency, as reflected by the fact that not all court decisions are published.

To address challenges in the judicial system, the National Justice Reform and Development Document, a summary of national consultations on justice, was published in 2023. It identified five broad objectives for improvement: (i) enhancing the status and working conditions of justice professionals; (ii) facilitating access to justice; (iii) improving the quality and efficiency of judicial services; (iv) reforming the criminal justice and prison systems; and (v) accelerating the digitalization of justice, rehabilitating existing infrastructure, and constructing new courthouses. A key component of these reforms is the revision of the Code of Civil, Commercial, and Administrative Procedures to eliminate discretionary powers and strengthen the regulatory framework. Without an efficient, transparent and predictable judicial system, it will remain challenging to attract investors beyond the extractive industries and foster a vibrant entrepreneurial ecosystem.

B. Leveraging Digital Technologies to Expand and Diversify Business Opportunities

Over the past decade, Mauritania's digital entrepreneurial ecosystem has evolved significantly, with advancements in digital financial services such as payments, money transfers, savings, credit, transaction banking, investment, and insurance via Internet and mobile channels. Despite this progress, the digital market remains nascent, with common challenges in low-income countries such as underdeveloped or missing digital markets. Historically, public institutions have worked in an uncoordinated manner to support digital entrepreneurship, although recent years have seen improvements. However, challenges such as inadequate digital infrastructure, limited access to technology, and regulatory challenges continue to hinder the full potential of digital development. Addressing these issues is essential for diversifying business opportunities and increasing productivity through digital advancements. This section delves into the digital economy, examining recent performance and identifying challenges for further expansion.

Mauritania's Digital Entrepreneurial Landscape: Navigating Challenges and Embracing Opportunities

Mauritania's digital entrepreneurial landscape has grown steadily over the past decade, particularly in Nouakchott. The capital hosts several incubators and an accelerator, along with co-working spaces that support digital entrepreneurs with training, coaching, and networking events. Despite limited opportunities for joint co-working spaces, some entities connect investors and startups. Specialization among incubators allows for tailored services, but they remain dependent on short-term projects funded by development partners.

Mauritania's digital market is nascent. Digital entrepreneurs face challenges as customers whether in business-to-consumer (B2C) or business-to-business (B2B) transactions require significant information and skills to adopt digital services. Although there are innovative business ideas, market development is slow and costly.

Public institutions in Mauritania have historically worked in an uncoordinated manner to support digital entrepreneurship, but this has improved since 2021. The government has taken steps to enhance coordination and effectiveness, particularly in the innovation and digital sectors. Key initiatives include the establishment of MTNIMA, the Digital Agenda 2022–2025, and the IBTIKAR program.

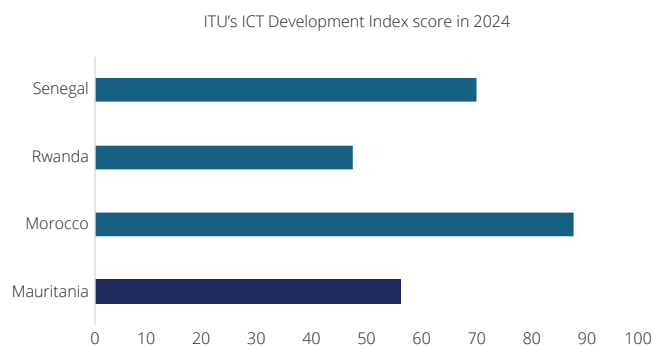
51 Article 206 : “ A titre exceptionnel, en dehors des cas prévus à l’alinéa précédent, la Cour suprême peut, à la demande de l’auteur du pourvoi, ordonner, en sa formation de jugement compétente pour le Jugement du pourvoi, qu’il soit sursis à l’exécution de la décision attaquée, si cette exécution doit provoquer une situation irréparable.

The market for digital financial services in Mauritania is still developing, covering payments, money transfers, savings, credit, transaction banking, investment, and insurance via Internet and mobile channels. Key providers include micro-finance institutions, banks, and mobile money operators. These services enhance transaction security and convenience, crucial for the digital economy. Despite this, only 23 percent of adults had a basic transaction account in 2022, compared to 55 percent in Sub-Saharan Africa. Mobile money account ownership is low at 10 percent, versus 33 percent in Sub-Saharan Africa. Debit (5.5 percent), credit (0.1 percent), and prepaid card (1.0 percent) ownership is minimal. Regulatory gaps have hindered growth, but the E-money Law (2021) and National Financial Inclusion Strategy (2023) are key steps forward.

Mauritania's Digital Awakening: From Lagging Behind to a Thriving Digital Economy

Mauritania's performance in digital and innovation development trails behind regional peers, as evidenced by international benchmarks. The International Telecommunication Union's (ITU) ICT Development Index (IDI), which measures countries' advancement in information and communication technologies, shows that

Figure 3.18: ITU's ICT Development Index score in 2024

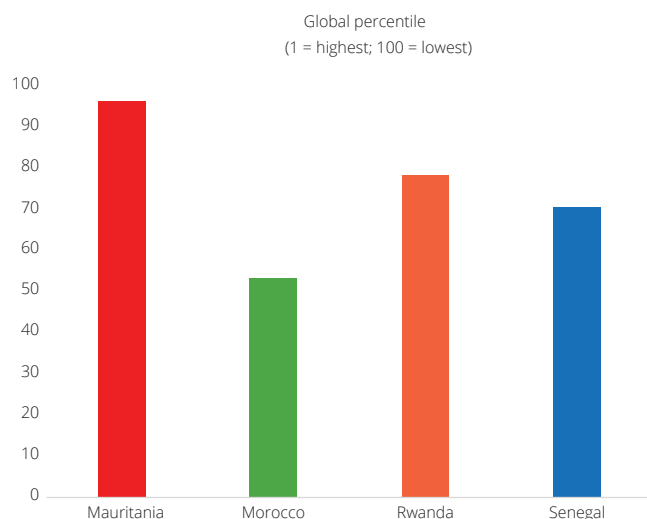


Source: International Telecommunication Union.

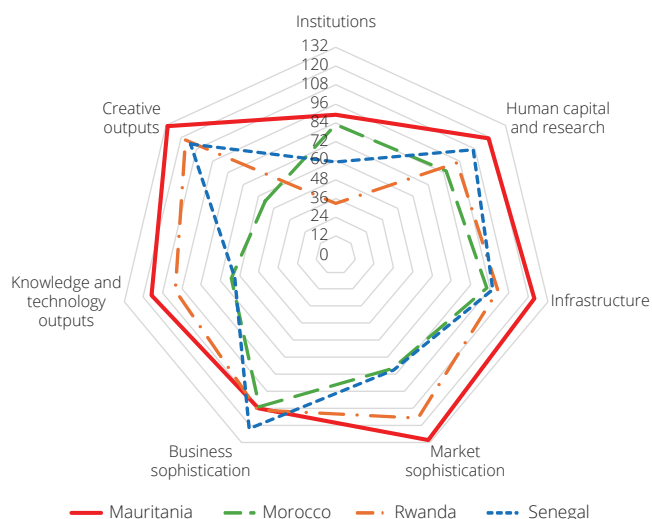
Mauritania lags significantly behind Morocco and Senegal but outperforms Rwanda (see Figure 3.18). This is despite Mauritania's GDP per capita being nearly 30 percent higher than Senegal's and more than double Rwanda's. Similarly, the World Intellectual Property Organization's (WIPO) Global Innovation Index (GII), which assesses innovation performance globally, ranks Mauritania in the 96th percentile (with 100th being the worst), placing it well behind Morocco (53rd), Senegal (70th), and Rwanda (78th) (Figure 3.19).

While Mauritania has been a late adopter of digital technologies, rising mobile internet access and digital applications are beginning to drive change. Critically, digital technologies hold significant potential to transform and diversify Mauritania's

Figure 3.19: WIPO's global innovation index 2023 (ranking 132 countries)



Source: World Intellectual Property Organization.



economy.⁵² They can boost business efficiency, drive economic growth, and support firms to invest and scale up their operations more rapidly. Digital platforms expand commerce by removing geographical barriers and increasing customer reach, while also fostering the gig economy by allowing individuals to monetize their skills and assets. Additionally, digitalizing G2B interactions improves transparency and access to reserves and reduces transaction costs. Internet usage has surged, with more than three in five Mauritians now online—a tenfold increase over the past decade. This growth has laid the foundation for a rapidly expanding digital economy in coming years.

Despite Mauritania's private sector's heavy concentration in trade and services, where an estimated 84 percent of the labor force operates informally, digital businesses are gaining momentum. According to l'Union Nationale du Patronat Mauritanien (UNPM), around 6 percent of its 700 members operate in the digital space. In June 2024, a government campaign to create a voluntary registry of digital businesses attracted 160 applications within just a few months, signaling growing interest and activity in the sector. New entrants in the digital business space in sectors like transport, digital financial services have disrupted traditional markets in Mauritania, rapidly becoming local market to local market leaders in the ride-hailing services and fintech segments. Following this rapid development, the authorities undertook efforts to organize and regularize the sector, including the recent government decree requiring prior approval and a transport license to operate digital public transport services. The digital services sector is poised for rapid growth in the coming years, driven by improved basic digital infrastructure and widespread mobile connectivity,⁵³ but structural challenges hinder the adoption of digital technologies and business models, discussed next.

Demand- and Supply-Side Challenges to the Development of Digital Businesses in Mauritania

Mauritania's digital businesses are predominantly small, young and they confront numerous challenges, that can be categorized into demand-side and supply-side challenges. Importantly, business leaders consulted for this analysis have emphasized the need for coordinated efforts by the government and private sector to address both sets of challenges to accelerate the adoption of digital technologies.

The development of Mauritania's digital services market is hindered by several structural demand-side challenges, including low digital literacy, weak infrastructure, and a small population size. Despite significant progress in internet access, with the proportion of the population without internet dropping from 76 percent in 2017 to 20 percent in 2024, many citizens remain unfamiliar with digital services. Additionally, one-third of adults are illiterate, which further limits the adoption of digital technologies. Efforts to address digital skills gaps, highlighted in the national development agenda, are hampered by systemic deficiencies in the education sector. Foundational digital skills are absent from basic and secondary curricula, and schools lack critical enablers, such as reliable electricity, IT equipment and trained teachers. As of 2021, 52 percent of the population lacked access to electricity, predominantly in urban areas, further limiting market growth. Finally, Mauritania's small population size also poses natural growth limitations.

Supply-side challenges to the development of digital services, on the other hand, include market failures, regulatory gaps, and infrastructure deficiencies. Information asymmetries distort market analysis and product development, discouraging market entry. Policy incoherence and a lack of structured consultation mechanisms amplify business risks and uncertainty. Governance challenges, such as resistance to digital transformation and insufficient technical expertise among public officials, further impede progress. Outdated or absent regulatory frameworks in key sectors like education and health, coupled with fragmented digital payment systems, create additional bottlenecks. The digital financial services (DFS) sector remains underdeveloped due to regulatory gaps and inadequate infrastructure. Limited access to equity financing, significant infrastructure deficiencies such as fragile telecommunications networks, high costs for high-capacity internet and unreliable electricity supplies compound these challenges, further restricting growth.

52 This section is partly derived and synthesized from sections of a forthcoming World Bank publication with the title 'Digital Economy Diagnostic Mauritania', under the Digital Economy for Africa Initiative, which the authors prepared in parallel with this chapter.

53 The Digital Economy Diagnostic for Mauritania.

To address both supply-side and demand-side challenges to digital development, a comprehensive policy approach is essential. On the supply side, specialization among incubators allows for tailored services, but they remain dependent on short-term projects funded by development partners. For sustained success, it is crucial to diversify product offerings and develop new revenue streams. The government can support market development, which is slow and costly, by investing in enhancing digital literacy, improving information dissemination, digitalizing public services and enabling regulation in successful digital sectors. Also, policies could emphasize improving infrastructure by expanding access to reliable electricity and promoting tailored digital solutions to overcome population size limitations. On the demand side, challenges such as enforcement, market development, interoperability and barriers like lack of funds, mobile phone, and personal identification need to be addressed. Introducing new digital services and business models tailored to local preferences could drive sustained growth.

This chapter delves into the barriers to business and digital adoption, underscoring the critical need for policy reforms aimed at enhancing competitiveness, attracting investment, and nurturing entrepreneurship. To improve the business enabling environment, policy priorities should concentrate on facilitating access to land and labor, streamlining the administration of taxes and trade procedures, and ensuring the security and effectiveness of contract enforcement and competition policy. The chapter also highlights the transformative potential of digitalization for Mauritania's economy, advocating for comprehensive reforms that empower private sector-led growth and the adoption of digital technologies (including interoperability between financial market players, facilitate service trade that is critical for technology transfer).

CHAPTER 4

POWERING THE TRANSITION TOWARD A LOW-CARBON AND CLIMATE-RESILIENT ECONOMY

KEY MESSAGES:

- Mauritania is highly vulnerable to climate shocks: Over the period 2000–2021, Mauritania ranked as the third country in Sub-Saharan Africa with the highest level of human impact from climate-related events.
- Climate vulnerability in Mauritania is exacerbating existing gender disparities in the labor market by adversely affecting women's Labor Force Participation.
- Relying on expensive imported oil for power generation results in higher domestic energy costs, stifling economic growth.
- Moreover, significant subsidies for domestic retail energy consumption, strain the government's budget and constrain fiscal space needed to invest in adaptation and promote low-carbon development.
- Investing in climate adaptation and expanding domestic low-carbon energy (gas, wind, solar), reduce transaction costs, cut energy prices, create new jobs, meet climate goals, and spur long-run growth.

Introduction

Mauritania is highly vulnerable to the impacts of climate change, ranking 12th among the most exposed countries country world-wide and third within Africa (World Bank, 2023). Climate change is projected to significantly reduce annual GDP by up to 9.3 percent by 2050 if no adaptation measures are taken, affecting labor, agriculture, infrastructure, and water resources (World Bank, 2022). Mauritania's vulnerability is further underscored by its low ranking on the ND GAIN readiness Index, underscoring the pressing need for effective climate adaptation strategies.⁵⁴

Mauritania's Nationally Determined Contributions (NDCs) estimate US \$10.6B in adaptation costs by 2030—yet with no clear financing strategy, climate resilience remains a major challenge. Relying solely on current domestic resources would require an average of 69 percent of 2023 total revenues and 123 percent of 2023 tax revenues annually. Despite efforts to enhance tax revenue, including reducing tax expenditures, the financing gap remains substantial. To address this, the 2025 Budget Law introduces a carbon tax of US\$10/tCO₂, and the government is considering reforming fossil fuel subsidies. The carbon tax is expected to generate additional revenues for productive investments and climate resilience, while also promoting low-carbon technologies and maintaining export competitiveness. Reforming fuel subsidies, which cost 2.9 percent of GDP in 2022, can contribute towards fiscal savings for adaptation investments and social programs, reduce fuel consumption, and encourage cleaner energy investments. These measures can accelerate economic diversification, growth, and job creation, improve access to essential services and enhance Mauritania's reputation for sustainable development, attracting foreign investment and international support. These policies on by themselves may not be catalytic enough, however.

Leveraging Mauritania's natural energy resources and implementing key policy reforms can drive sustainable economic growth and job creation while meeting climate goals. The country's vast potential for wind and solar electricity generation, combined with the development of natural gas resources, presents a unique opportunity for cost-effective low-carbon economic growth. By capitalizing on these resources and enacting policy reforms such as carbon pricing and fuel subsidy restructuring, Mauritania can achieve its climate objectives, attract foreign investment, enhance infrastructure and stimulate job creation. This chapter systematically assesses the expected costs and benefits of the low-carbon transition and climate adaptation in Mauritania, addressing the economic, fiscal and distributional impacts of these essential reforms. It begins by summarizing the main socioeconomic impact of climate change in Mauritania and the net benefits of investing in adaptation. It then assesses the fiscal, growth and distributional impact of fuel pricing reforms and carbon taxation. Finally, the chapter examines the macro-fiscal impact of low carbon transition.

A. Mauritania's Climate Challenge: Navigating Impact and Building Resilience

Mauritania faces severe climate change impacts mainly due to land degradation, desertification, and flooding events. Since the 1950s, average annual temperature has increased by 1.5°C, with nearly 45 more days in a year having a Heat Index above 35°C. Mauritania is also becoming drier, with average annual rainfall decreasing from about 85 mm in 1950 to 63 mm in 2020 and the number of consecutive dry days increasing (by about 1 day per decade from 1950–2020 compared to 4 days per decade from 1991–2020). A recent drought spanning June 2020 to November 2022 affected up to 1/3rd of the population contributing to food and nutritional insecurity. Flood events that now occur with a frequency of nearly one every two years have wiped out villages, led to livestock losses, and upended at least 10,000 livelihoods and left about 10 dead on several occasions.⁵⁵

Mauritania's contribution to global GHG emissions is marginal but rising and reducing the country's reliance on fossil fuels for energy and transport could have important fiscal and development implications. While Mauritania's annual GHG emissions correspond to 0.03 percent of a global share and per capita emissions are

54 The ND-GAIN Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. <https://gain.nd.edu/our-work/country-index/rankings/>

55 <https://public.emdat.be/data>, retrieved August 2025.

Figure 4.1: Drought-affected regions report lower female primary completion rate

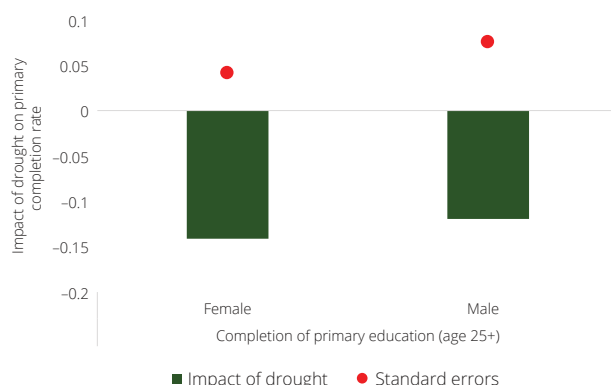
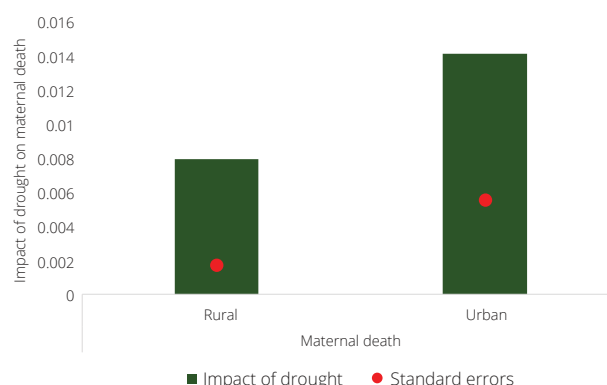


Figure 4.2: Drought-affected regions report higher maternal death



Source: World Bank Staff using DHS data.

48 percent below the global average, GHG emissions have nearly doubled from 6.9 Mt in 1990 to 12.9 Mt in 2020. This is mainly driven by methane from livestock, but there has also been a substantial growth of emission from transportation and power generation. Emissions from livestock, agriculture, and land use combined accounted for 66 percent of total emissions in 2023, while energy accounted for 33 percent. Emissions from flaring while insignificant can be expected to grow with the onset of natural gas exploitation beginning in 2025. This growth in emissions points to the need to for low-carbon investments in order for Mauritania's efforts to remain aligned with its NDC and to limit exposure to trade policies such as the Carbon Border Adjustment Mechanisms (CBAM).

The G5 Sahel Country Climate and Development Report (CCDR, World Bank, 2022) models the economic impact of climate change through seven impact channels for each country for the period 2021–2050: (i) Rainfed crop yields; (ii) Heat stress and labor productivity; (iii) Heat-related human health shock; (iv) Livestock yields; (v) Inland flooding; (vi) Roads and bridges; and (vii) Sea level rise. To account for uncertainty, the CCDR models the impact of climate change on growth and poverty under four climate scenarios: (i) Pessimistic (higher temperature increases and larger precipitation changes); (ii) Optimistic (lower temperature increases and smaller precipitation changes); (iii) Wet (largest precipitation increases); and (iv) Dry (smallest (or decrease) precipitation changes).

The analysis indicates that without adaptation measures, climate change shocks will lead to significant GDP losses, growth volatility and increases in poverty and inequality. By 2050, annual GDP in Mauritania could be reduced by 5.7 percent under the wet and optimistic scenarios and by 9.3 percent under the dry and pessimistic scenarios.

Climate change is already affecting gender disparities in the labor market by influencing key determinants of women's Labor Force Participation (LFP). Using causal analysis, we estimate the impact of droughts on key educational and health outcomes.⁵⁶ Droughts have disrupted human capital outcomes, particularly in regions like Sud-Est and Fleuve (see World Bank Climate Change Knowledge Portal). One significant impact is on education, where drought-affected regions have experienced a 12-percentage point decline in primary education completion rates (Figure 4.1). This decline is notable among women in rural areas, where the educational attainment gap affects their economic opportunities and future labor force participation, contributing to the labor gender gap in the near to medium term.

Droughts have contributed to an increase in maternal mortality and early pregnancies among young women. Regions affected by drought report a 1.5 percentage points higher rate of early pregnancies compared to non-affected areas, with a more pronounced impact in rural regions. Early pregnancies limit young women's access to education and employment, perpetuating economic challenges. Maternal mortality rates have also risen in drought-affected areas, intensifying the economic and health vulnerabilities faced by women (Figure 4.2).

56 See annexes and the Gender Background Paper for details about the methodology and findings.

The elevated risk of maternal death, especially in rural areas, highlights the compounded difficulties that climate change poses to women's health and economic participation. While there is no direct effect of droughts on female LFP, the broader impact of climate shocks on human capital accumulation could affect women's economic participation in the future, potentially widening the gender gap in labor force participation and creating additional challenges for women in Mauritania as they encounter systemic barriers to employment.

B. The Net Benefits of Investing in Adaptation Are Positive

The benefits of investing in climate adaptation outweigh the costs. The CCDR has modeled potential adaptation interventions for three impact channels: (i) extending irrigation for rainfed crops; (ii) improving livestock feeding practices; and (iii) investing in climate-resilient roads and bridges. The analysis shows that the damage caused by climate change can be significantly reduced, even with partial adaptation. In Mauritania, GDP losses due to climate change amount to only 5.7 percent by 2050 with partial adaptation in dry and pessimistic climate scenarios, compared to 9.3 percent without any adaptation. The CCDR contains a more detailed discussion on the net benefits of adaptation.

To promote resilient growth in the face of climate change, the G5 Sahel CCDR identifies measures, policies, and investments in five priority areas: (i) institutions; (ii) climate finance and risk mitigation; (iii) energy (highlighting the opportunity to develop along a low-carbon path by reducing emissions in the energy sector while meeting the increased demands of a growing economy); (iv) landscapes (integrated management of natural capital—agriculture, water, and environment); and (v) cities (resilient urban development). Regional cooperation, leveraging international climate finance and private capital are also essential for sustainable and inclusive development.

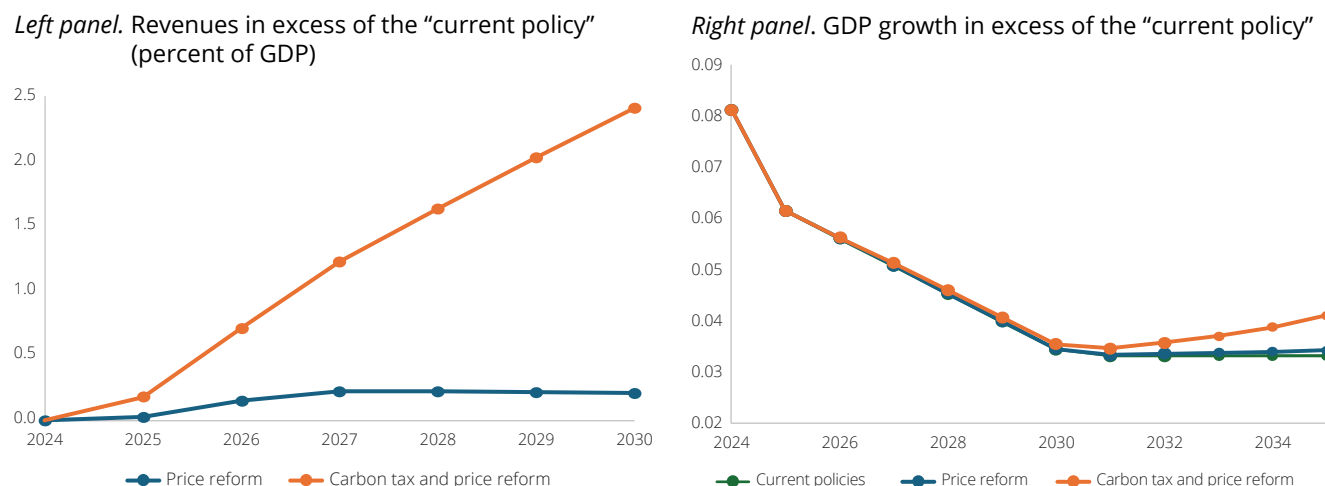
C. Widening the Fiscal Space to Invest in Adaptation While Incentivizing the Transition Toward a Low Carbon Economy

To widen the fiscal space and help promote resilience against climate change, Mauritania can consider a low-carbon development growth model. The growth, fiscal, and distributional impacts of fuel pricing reform centered on carbon pricing at modest rates are expected to be positive. Phasing out domestic price controls combined with carbon pricing at modest rates would have minimal adverse or even positive impacts on Mauritania's economic growth, provided that the proceeds are recycled into productive public investments and/or used for targeted transfers to households to help directly alleviate negative impact from higher energy prices on consumption.

Mauritania has historically imported refined petroleum products, even during the brief period 2006-2016 when it was a crude oil exporter. In 2023, refined petroleum was its top-imported product, with the import value of mineral oil and fuels settling between US\$1–2 billion in each of the three years leading to 2023.⁵⁷ This amounted to between 30 percent and 40 percent of the value of its total imports and to 1/5th of GDP. Imports of petroleum products comprise mainly HFO and diesel, which dominate electricity generation and have historically catered to just over two-thirds of domestic electricity consumption and generation. About half of this petroleum-based power generation is met through diesel and the other half through HFO. Besides use in power generation, including for off grid mining operations, diesel also has applications in transportation.

57 ITC (2024), International Trade Center—Trade Map, https://www.trademap.org/Product_SelCountry_TS.aspx?nvpm=1%7c478%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c1%7c1%7c1%7c1%7c1

Figure 4.3: Fiscal and growth impact of different policy scenarios⁶⁰



Source: Climate Policy Assessment Tool (CPAT).

To obtain economic insights regarding probable energy pricing policy reforms, three impact scenarios of a fuel and carbon pricing reform are evaluated with the help of the Climate Policy Assessment Tool.⁵⁸ First, a “current policies” scenario maintains the status quo with historical retail fuel price controls and no carbon pricing reform. The second “price reform” scenario considers price controls being phased out over a three-year period beginning in 2025. This implies that at the end of that period, pump prices fully reflect the dynamics of international prices. No carbon taxes are introduced in this scenario. Finally, the “carbon tax and price reform” scenario builds on the previous “price reform” scenario by introducing a carbon tax that rises from US\$5/tCO₂ in 2025⁵⁹ to US\$25/tCO₂ in 2030. The carbon tax is applied across all fuels, except for liquified petroleum gas that is mainly used for clean cooking and heating by both urban and rural households. Building on these (sub-) scenarios, the analysis in Sections D, E, and F will feature two overarching narratives in which these pricing policies are implemented, that differ depending on the introduction of additional government investments to phase in low-carbon fuels, in particular natural gas, wind and solar into the generation mix.

The combined carbon tax and price reform are projected to generate new revenues to the tune of US\$360 million (2.8 percent of GDP) by 2030 (Figure 4.3, left panel), assuming no additional government policies on investing in domestic-low carbon energy resources. This comprises fiscal resource savings from the elimination of energy consumption subsidies and US\$320 million in new financing due to the carbon tax. In the case of the price reform alone, the government’s fiscal position improves by US\$40 million (0.4 percent of 2023 GDP). Recycling subsidy reform and carbon tax revenues into activities with a greater fiscal multiplier can boost growth. Investment in high-value and climate-resilient public infrastructure projects, information and communication technologies, and water sanitation projects, for example, are known to have greater fiscal multipliers and build better resilience to climate change than e.g., reductions in corporate and labor taxes. Suggestive growth impacts drawing on standard multiplier shown in (Figure 4.3 right panel) point to higher growth, and we confirm this with simulations with the Macro-Fiscal model in Section D.

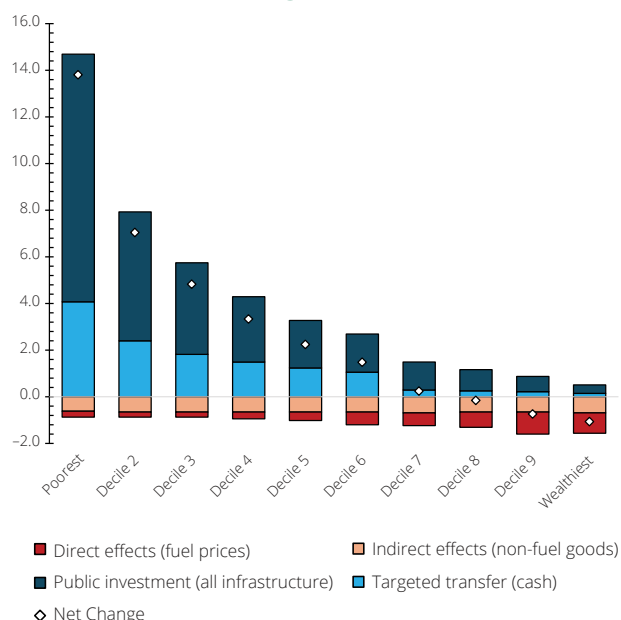
The amount of revenue collected and how it is recycled is particularly consequential because of the following mechanics. Eliminating fuel price controls enables the government to recoup financing that would otherwise go towards subsidizing retail fuel consumption. Because these funds are modest, they have a limited effect on elevating GDP growth when recycled (Figure 4.3, right panel). Yet, the carbon tax, even if modest, has more comprehensive

58 <https://worldbankgroup.sharepoint.com/sites/CPAT>, hosts up to date information about CPAT. The tool is jointly developed by the World Bank and the International Monetary Fund.

59 The proposed average price is within the range of carbon prices in countries like China and South Africa of roughly US\$ 12/tCO₂ and greater than US\$ 4–7 in Chile, Colombia, and Mexico. Also, it is recommended to start out with modest rates, and as impacts on the economy are better understood, ambition is raised (World Bank, 2024).

60 The underlying international oil price on which these projections are based are by the International Energy Agency and rises from around USD 77 in 2024 to USD 100 in 2030. This applies for Figure 4.1 to 4.6 unless otherwise specified.

Figure 4.4: Relative consumption impacts (in percent total consumption) on households by decile from the carbon tax and revenue recycling options in 2030⁶²



Source: CPAT.

coverage, leading to much more substantial revenues by 2030, that can be recycled in a targeted fashion to boost growth. On the other hand, the carbon tax, and to a lesser extent the price reform, elevates energy prices, thereby depressing household consumption, which negatively impacts growth. It also raises input costs for industry especially transportation, iron and steel, construction and mining operations which can hamper international competitiveness. In 2030, energy prices are on average 14 percent higher due to the carbon tax, which has the potential to half the economy's growth rate relative to the "current policies" scenario, unless revenues are judiciously recycled to offset those potential adverse impacts. The growth bump observed starting in 2031 is consistent with the offsetting effect of recycling revenues in productive investments.

The proceeds from fuel price reform and the carbon tax create fiscal space to also invest in climate-related adaptation activities and build resilience. Productive public investment that enhances resilience while promoting growth includes strengthening water infrastructure, promoting climate resilient crops and irrigation, improvements in livestock feed practices, improving health infrastructure, building climate-resilient infrastructure that promotes and ensures interconnectivity even during climate-related disasters. The revenue recycling option associated with Figure 4.3 (right panel), is to recycle 70 percent of revenues

into public investment that could build resilience and increase productivity while the remainder is for targeted transfers to help cushion the bottom 60 percent households from the impact of higher fuel prices.⁶¹

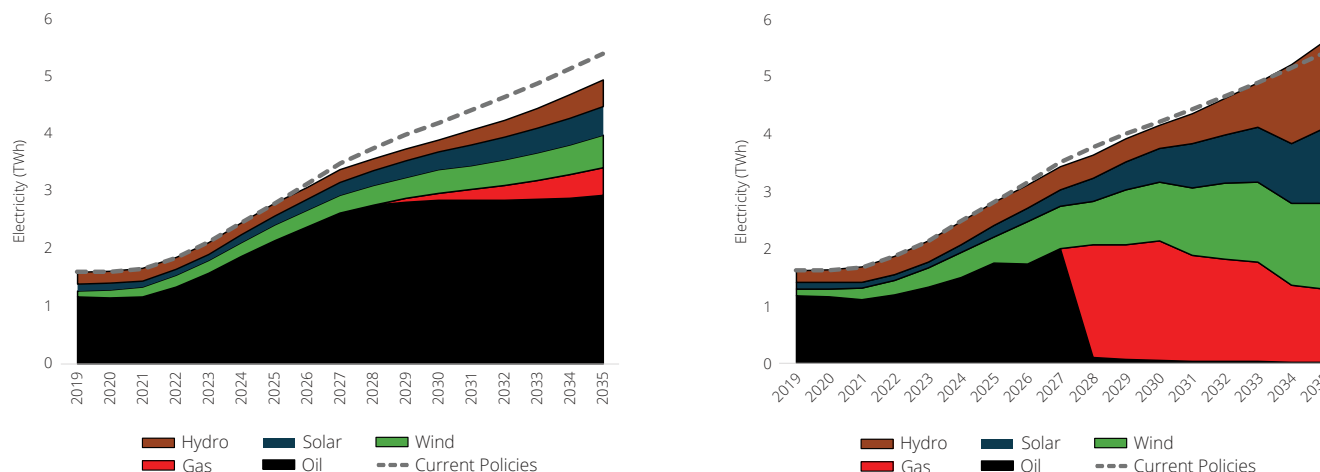
While wealthier households are slightly worse off due to higher energy prices from the carbon tax and price reform, most households—especially the poor—could be shielded (Figure 4.4). Targeted transfers to the bottom 60 percent make those households better off than before the policy. The bottom 70 percent of households are not worse off under carbon pricing than before it. Moreover, the negative impacts on the top 30 percent are minimal, impacting their consumption of fuel and non-fuel goods by less than 1 percent. The current system in Mauritania of fixing the retail fuel prices is akin to a blanket (rather than targeted) subsidy and therefore benefits wealthier households since they consume more fuel per capita. This is clear from the figure as the adverse "direct effects" of elevated fuel prices are more pronounced for the top deciles. Blanket subsidies also perpetuate inequitable access, suggesting that there is economic value for Mauritania to consider a targeted subsidy approach alongside investments in productive public infrastructure projects.

An additional benefit of carbon tax combined with the reform of fuel subsidy is the reduction of GHG emissions by nearly 4 percent by 2030 (See Figure A4.1 in annex). This is insufficient to attain the unconditional NDC commitment (11 percent reduction), however. While an even greater carbon price has the potential to curb emissions further, given the current state of the power sector and Mauritania's energy access goals, higher prices could be counterproductive if they raise energy costs more than they are able to reduce emissions. A government policy, leveraging various financial instruments, of promoting investment in domestic resources can help ensure low carbon development, consistent with Mauritania's NDC.

61 Currently, only the School Feeding Program, and to some degree the Tekavoul program, have a targeting performance which is close to the proposed targeted transfer. With the ambition of using targeted social transfers to mitigate the expected negative impact of carbon taxes on household welfare, the Government needs to (i) expand the coverage of social programs (horizontally), (ii) increase the transfer amount for beneficiary households (vertically), and (iii) extend the social registry and introduce a proxy means test for better targeting of transfers. In addition, the Government would need to (iv) commit to a credible and sustainable financing strategy for social programs.

62 This presents change for the "Carbon tax and price reform" scenario relative to "Current policies scenario."

Figure 4.5: Generation (in TWh) in the “carbon tax and price reform” scenario in the absence (left panel) or presence (right panel) of a low-carbon energy investment policy consistent with the Mauritania Energy Master Plan⁶⁴



Source: CPAT.

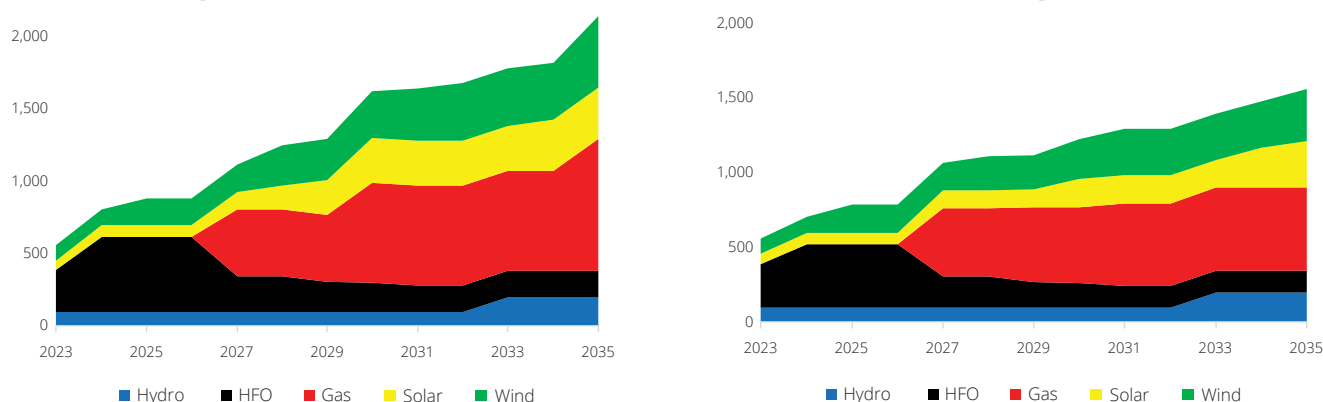
While a subsidy and carbon tax are generally positive for Mauritania, the level of benefits also hinges on realized crude oil prices. This is because whether fuel is taxed or subsidized in Mauritania, depends on the level of international prices. The above scenarios are premised on projections for the international crude oil price from the International Energy Agency that consistently remain above US\$80 through to 2030. Based on currently posted domestic fuel prices in Mauritania, this means that the government would have to subsidize domestic consumption if it were not to raise those domestic prices further. However, if realized international crude oil prices through to 2030 settle around or below US\$70 instead (as is the case currently), the government would tax domestic consumption, meaning that, under a pricing reform alone, this would translate into a revenue loss of about US\$ 140 million or 0.8 percent of GDP by 2030. The carbon tax is key to recouping such lost revenue, and it also expands the tax base to include the power sector. This enables the government to collect up to 1.4 percent of GDP or 200 million by 2030 in additional revenue in the “carbon and pricing reform” vs “current policies” scenario. In sum, price reform and carbon pricing need to go hand-in-hand to ensure higher government revenue collection and create the needed fiscal space.

By tapping its vast clean energy resource base, Mauritania can diversify its energy mix enough to make carbon pricing even more effective for meeting its (unconditional) NDC. A supportive environment that assures investment in its low-carbon resources, natural gas, solar, and wind, ensure that Mauritania’s generation mix is well-diversified for carbon pricing to be effective at both curbing and regulating carbon emissions. Letting the capacity mix in CPAT follow the low scenario (“Scenario Bas”) from Mauritania’s energy generation masterplan⁶³ (right panel of Figure 4.6), results in natural gas fully replacing petroleum in power generation by 2028 (right panel Figure 4.5). Under this capacity mix, the carbon price is significantly more effective leading to emissions reductions of 11 percent, helping realize the (unconditional) NDC, which is one of Mauritania’s key near-term climate commitments. Recommended or plausible levels for the carbon tax, when not accompanied with direct financial investment in low-carbon generation, trigger trivial investments in low-carbon energy, failing to reshuffle the capacity mix (Figure 4.6, left panel). A sufficiently diversified capacity mix is essential to having an effective carbon price that does not unreasonably depress energy consumption.

63 “Schéma Directeur Production-Transport de la Mauritanie Etude du Schéma Directeur de la Production.”

64 This refers “Carbon tax and price reform” scenario. Left panel: with capacity investments projected per the CPAT power module. Right panel: Assuming the capacity investments follow the Low scenario (“Scenario Bas”) of the Mauritania generation masterplan. Gas prices are assumed to average USD\$ 4 per million British thermal units (MMBtu).

Figure 4.6: Projected capacity mix in MW for the “Reference” (left panel) and “Low” (right panel) scenarios as informed by the Mauritania energy masterplan



Source: Data extracted from Mauritania’s energy generation masterplan.

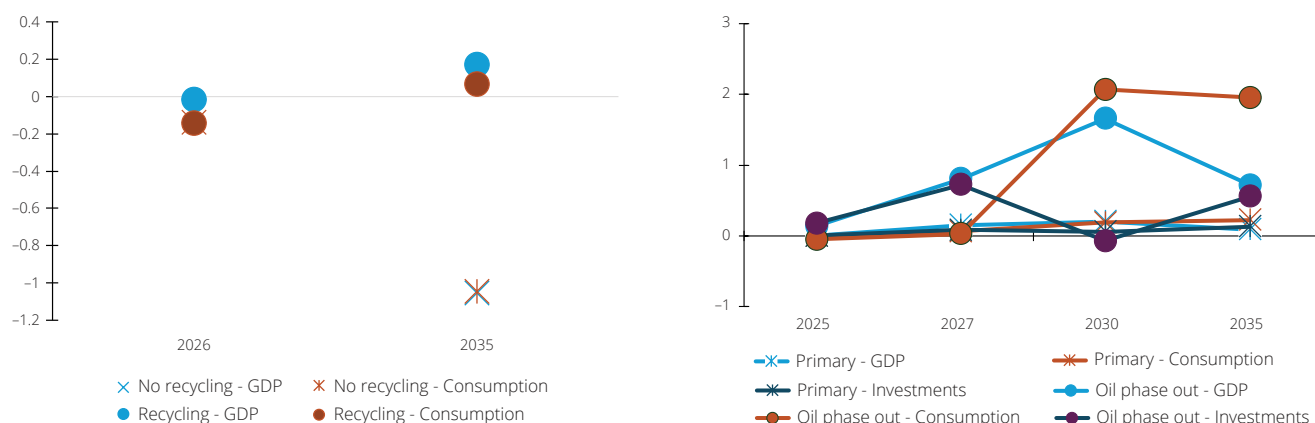
Beyond the emission reduction potential, low carbon investments foster new employment opportunities both within and beyond the energy sector. For instance, the replacement of petroleum by gas in power generation could also reduce the cost of production of energy, stimulate private investment and create both direct and indirect jobs. Direct jobs relate to the construction, assembly, operation, and maintenance of installations. Indirect jobs are linked to supply chains and comprise the manufacturing components as well as import and trade. Induced jobs are associated with increased spending by holders of direct and indirect jobs and consumers enjoying lower energy costs. Mauritania stands to benefit from all these categories. Moreover, because of task similarities between oil- and gas- based power generation, transitional impacts on workers linked to oil-based power generation tend to be minimal.

D. Assessing the Macro-Fiscal Impacts of Low Carbon Development

Carbon pricing and low carbon investments can each contribute meaningfully towards Mauritania’s economic performance, but price, wage, and cost of finance pressures have the potential to impose key growth tradeoffs. Section C and Figure 4.3 left panel argued that recycling carbon revenues into investment projects with high fiscal multipliers boosts economic performance. Those insights draw on a partial framework, however. That is, the feedback is one way: from revenues, to investments, to growth. In a general equilibrium context, carbon pricing or low-carbon investments have the potential to spur inflation, which can culminate in reduced consumption and growth relative to counterfactual. Applying the World Bank’s Macro-Fiscal Model (MFMod)⁶⁵ to explore potential implications, it is apparent from Figure 4.7 left panel that if revenues are allocated to public investments in a budget neutral manner, GDP and consumption are greater relative to the counterfactual without a price reform and carbon tax policy. Importantly, with carbon revenues recycled into the general budget, GDP and consumption are lower both in the short- and long- run relative to the baseline.

⁶⁵ CAPEX and OPEX from CPAT have been integrated into MFMOD, primarily reflecting changes in import patterns. Assuming that CAPEX is driven by public investments, real investment is expected to remain constant—no additional productive capital compared to the baseline, given that the same output of electricity will be produced—while nominal public investments increase accordingly. Likewise, changes in CAPEX are assumed to be imported by adjusting the import price deflator, thereby impacting macroeconomic dynamics through price channels. The integration of OPEX is more nuanced, as aggregate models are based on value added, with intermediate consumption being implicit. A change in OPEX will result in a change in real imports. Additionally, it is implied that this change in OPEX also reflects a change in production technology. In the scenarios considered, the phasing out of oil in favor of low-carbon technology leads to a decrease in intermediate consumption in the production technology. This is captured in the aggregate model as a change in total factor productivity further assuming that half of the changes in OPEX will translate into a change in intermediate consumption to account for adjustment costs.

Figure 4.7: Percentage deviation of GDP and Consumption for the “carbon tax and price reform” relative to “current policies” scenario⁶⁶



Source: MFMOD.

Recycling carbon tax revenues via capital expenditure in a budget neutral manner enhances long-term economic growth without compromising public finances.⁶⁷ Higher energy prices, even as carbon tax revenues are funneled into the general budget, can suppress consumption and GDP as shown in the “GDP/Consumption w/o recycling” pathway in the left panel of Figure 4.7. By recycling carbon tax revenues into capital expenditures, however, the government can stimulate aggregate demand enough, not only to offset potential adverse impacts but also to crowd-in long-term investments in infrastructure, technology, and other critical sectors as capital becomes increasingly cheaper. Even as the immediate effect of higher energy prices can result in a temporary reduction in consumption, investing in capital investments ensures that consumption and GDP recover and surpass “current policies” (Figure 4.7 left panel w/ recycling pathway). The increased capital expenditure drives output, fostering a more resilient and sustainable economic environment. Consequently, this approach balances the potential adverse impacts of carbon tax adoption with robust medium-term economic growth.

Low-carbon investments, even though capable of stimulating the economy in the short-run, are costly to finance which can be a drawback for long-term economic performance. However, Mauritania is in a unique circumstance as it currently spends around 1 billion dollar (10 percent of GDP) on oil imports in support of domestic electricity generation. Redirecting funds that would otherwise be spent on oil imports into the domestic economy frees up foreign reserves to be allocated to productive capital. It also expands the future fiscal space. Together, these can boost economic growth in the longer term beyond the initial stimulus stemming from capital expenditures and investment into low-carbon technologies. To explore this possibility, two narratives are introduced into MFMOD. In the first, the price reform and carbon tax are introduced without the industrial policy to invest in low-carbon options that would lead to the rapid phasing out of oil in power generation, i.e., “primary narrative.” In the second, the price reform and carbon tax are introduced alongside the industrial policy to rapidly phase out low-carbon investments, i.e., “oil phase out” narrative. We contrast these two against the baseline with neither the price reform, nor the carbon tax, nor the industrial policy on low-carbon investments, i.e., the current policies scenario.

⁶⁶ Right panel: percentage deviation of GDP, consumption, and investments in the “oil centric” (i.e. with oil dominating power generation) and “phase out” (i.e. with oil phased out in favor of natural gas and renewables) technological pathways. Recycling of carbon tax revenues into productive investments and power generation capital and operation expenditures introduced into the government budget. with carbon tax revenues and capital and operations expenditures for power generation from CPAT introduced into government revenue and spending within MFMOD. “w/o recycling” allocates carbon tax revenues into the general budget (i.e. current spending) while “w/ recycling” allocates carbon tax revenues in a budget-neutral fashion into productive investments.

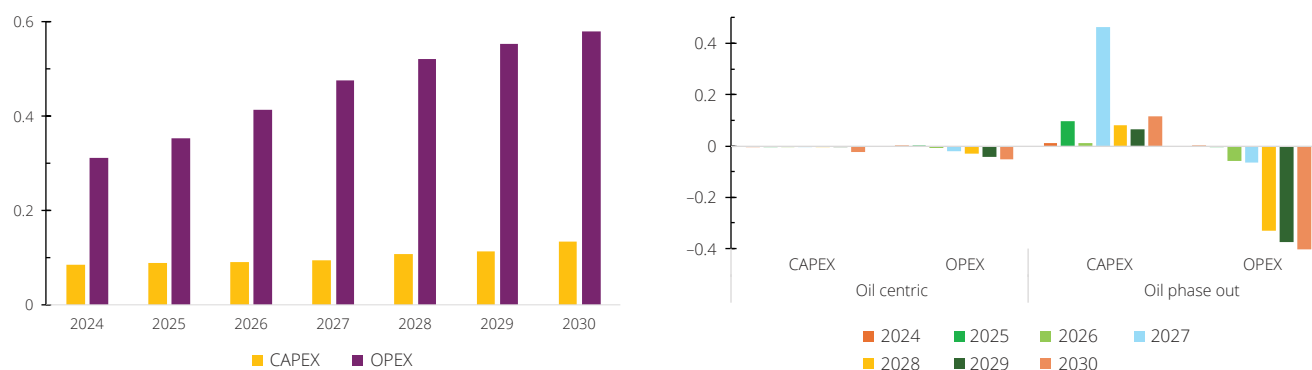
⁶⁷ Carbon taxes are projected to generate significant fiscal revenues for Mauritania, with estimates from the CPAT model indicating USD 20 million in 2026 and nearly USD 400 million by 2035 (constant 2023 USD). These projections are integrated into the MFMOD standalone model for Mauritania, an updated version of the model previously used for the G5 Sahel CCDD, with a baseline derived from Chapter 1. The fiscal revenues, primarily borne by households and added to the general budget, lead to shifts in consumption and aggregate demand. To ensure budget neutrality, a recycling scenario is introduced where the government reallocates these resources to increase productive capital expenditure, thereby fostering economic growth and enhancing infrastructure development.

The combined impact of recycling carbon tax revenues and simultaneously investing in low-carbon technologies (i.e. the oil phase out technological pathway) has a substantial positive impact on the economy (Figure 4.7, right panel). By 2035, GDP is nearly 1 percent higher than in the “current policies” baseline where the government neither implements the price reform nor the carbon tax. Consumption is even higher at 2 percent. Investment has the effect of immediately boosting GDP, by both increasing the capital stock available for production and incentivizing labor force participation. Greater earnings by labor in turn supports increased consumption which responds with some delay relative to the GDP augmenting impact of capital investments. Throughout the decade to 2035, these mechanics lead to GDP and consumption consistently being elevated relative to the counterfactual. Since the government borrows to support low-carbon investments, public debt is 5 percent of GDP higher by 2035, compared to the counterfactual when the government does not invest in low carbon technologies. The repayment of debt can later become a drag on the economy. This, however, is not the case here because Mauritania reduced dependence on oil improves its terms of trade, as more is invested within the economy.

E. Closing the Low-Carbon Transition Financing Gap

Green growth is in Mauritania’s economic and climate interest, but the cost of the transition needs to be explicitly considered. From its mitigation NDC, Mauritania expects to finance 2 percent of its US\$34.3 billion projection through domestic resources, an amount that comes to just under US\$ 700 million. Figure 4.8 (left panel) shows CAPEX and OPEX under the “current policies” scenario. If oil prices average over US\$ 77 and Mauritania maintains an oil-dominated power generation profile, it would spend more than US\$ 300 million on OPEX annually with much of this expense being fuel costs. By contrast, if Mauritania actively phases out oil, Figure 4.8 (right panel) shows that CAPEX would increase, with costs peaking at just over US\$ 400 million in 2027. OPEX would fall more than the increase in CAPEX, however. Table 4.1 shows that the combined CAPEX and OPEX cost is least under the “Carbon tax and price reform” with oil phase out, affirming that the low-carbon transition is capable of being cost-efficient relative to the “current policies” scenario. International oil prices would have to fall well under US\$ 70 for the “current” policy’s scenario to economically breakeven against the “carbon tax and price reform” scenario with oil phase out.

Figure 4.8: Cost of the transition to a low-carbon economy under different policy scenarios⁶⁸



Source: CPAT and authors calculations.

68 Left panel shows capital expenditures (CAPEX) and operating expenditures (OPEX) in US\$ billion for the “current policies scenarios.” Right panel shows the difference in cost (CAPEX and OPEX) between the “carbon tax and price reform” and “current policies” for the overarching “oil centric” and “oil phase out” story lines. The underlying international oil price on which these projections are based are by the International Energy Agency and rises from around USD 77 in 2024 to USD 100 in 2030. Gas prices are assumed to average USD\$ 4 per MMBtu over the same time horizon.

Table 4.1: The sum of CAPEX plus OPEX in US\$ million between 2024 and 2030

"Current policies"	"Carbon tax and price reform" in oil centric	"Carbon tax and price reform" with oil phaseout
3,904.38	3,728.80	3,519.36

Source: CPAT.

Note: The underlying international oil price on which these projections are based are by the International Energy Agency and rises from around US\$77 in 2024 to US\$100 in 2030. Gas prices are assumed to average USD\$ 4 per million British thermal units (MMBtu) over the same time horizon.

Mauritania's limited fiscal capacity for investment in adaptation and inadequate urban planning increases its climate vulnerability and impacts growth volatility. This chapter indicates that carbon taxation and the reform of fuel subsidies may contribute but will not be sufficient to create the necessary fiscal space for adaptation investments. Additional measures to expand fiscal capacity will be required, while appropriate allocation of revenue into adaptation investments and mitigation could support long-term growth and job creation.

CHAPTER 5

A COMPREHENSIVE REFORM PROGRAM TO BOOST PRIVATE-SECTOR-LED DIVERSIFICATION AND JOB CREATION

This report examines the near exhaustion of Mauritania's current growth model and identifies four challenges to realize its development ambitions and embark on a path of higher growth and job creation.

They are: (i) Weak labor demand in productive sectors and low labor force participation, especially among women and youth; (ii) Weak productivity growth, constraining labor earnings and economic diversification; (iii) Limited investment in non-extractive sectors, resulting in insufficient private sector development; and (iv) High growth and revenue volatility, exacerbated by climate risks and commodity dependence. While numerous other specific challenges to growth and employment generation have also been identified throughout this report, these four broad challenges encapsulate the core limitations of Mauritania's current extractives-based growth model.

As these growth-constraining features have led to low GDP per capita growth and slow convergence towards UMIC status, Mauritania needs to implement a comprehensive and ambitious reform package that tackles them head-on. The need for comprehensive reforms becomes evident by the multiple ways in which key structural challenges affect the economy's growth and employment generation prospects by perpetuating these features:

- Low labor force participation—especially for women—and limited access by firms to workers with suitable skills contribute to **weak labor demand in productive sectors**.
- High market concentration; limited technology adoption; and low innovation capabilities on the part of firms help explain **low productivity growth**.
- Limited firm-level competition; asymmetries in asset ownership and access to credit; lack of enforcement of court decisions; low access to land and poor quality of land management; limited access to skilled labor; and an outdated labor market regulatory framework lead to **limited investment in the non-extractive sectors**.
- A constrained fiscal space to invest in adaptation and inadequate urban planning makes Mauritania more prone to **climate vulnerability and its impact on growth volatility**.

The remainder of this chapter is organized as follows. The first section of this chapter elaborates on the proposed policy options to achieve sustainable growth and job creation. The second section estimates the potential growth and job impact of selected reforms across the main policy areas.

A. Policy Options to Enhance Growth and Job Creation in Mauritania

Policy reforms are organized under a three-pillar growth and jobs framework aimed at jointly addressing the growth-constraining features of Mauritania's model noted above. The three pillars are: (i) *building a strong infrastructure foundation* by addressing gaps in physical, human and natural capital; (ii) *creating a predictable regulatory environment* aimed at removing barriers to private-sector investment in non-extractive sectors and fostering economic diversification; and (iii) *fostering a dynamic private sector* by facilitating technology adoption as well as firms' access to finance and critical skills.

An unwavering focus on human capital development permeates all three pillars of the growth and job framework, ensuring Mauritania's workforce is well-prepared for both its current and future economic realities. This entails a dual strategy: for *today's jobs*, where the informal sector predominates, efforts must be geared towards enhancing the productivity and quality of self-employment and micro-enterprises through tailored vocational training, digital inclusion, and innovative financial services like microfinance. Concurrently, to prepare for *tomorrow's jobs* and the transition to a more diversified economy, foundational investments are essential in early childhood education, health, and nutrition, coupled with scalable programs for market-relevant skills—including STEM and agile skilling—to ensure the growing youth population can fill productive wage jobs. This integrated approach is crucial to unlocking Mauritania's full human capital potential.

While the proposed reform program is ambitious, it also considers Mauritania's implementation capabilities. In particular, it takes into account the finding that lack of complementary reforms and inadequate public sector implementation capacity are often the main obstacles to successful reform implementation (Loayza and Woolcock, 2020). Furthermore, and consistent with Mauritania's level of development, the proposed reforms pave the way for increased investments in physical and human capital as well as for faster technology adoption rather than frontier innovation. These aspects are incorporated in the prioritization criteria described in the next subsection. The specific policy reforms proposed under each policy area are described below. A detailed mapping from growth-constraining features of Mauritania's model to policy reforms—and how the latter are organized around the three-pillar framework—is provided in Table 5.1.

Table 5.1: Comprehensive growth and jobs policy framework for Mauritania

Growth challenges of Mauritania's extractives-led model	Key drivers	Key policy reform areas	Corresponding pillars in the world bank group's strategic framework for private sector development and job creation
Weak labor demand in productive sectors and labor force participation, especially among women and the youth	Low female labor force participation	Scaling-up investment in early childhood education Eliminating the gender gap in secondary and tertiary education Scaling-up investment in maternal and reproductive health services for adolescent girls and young women Updating the labor code	Building a strong infrastructure foundation of physical, human, and natural capital Creating a predictable regulatory environment
	Limited access to skilled workforce and significant skill mismatches	Establishing a Labor Market Information System (LMIS) Updating the labor code Scaling up investment in early childhood education	Building a strong infrastructure foundation of physical, human, and natural capital Creating a predictable regulatory environment

(continues)

Table 5.1: Comprehensive growth and jobs policy framework for Mauritania (Continued)

Growth challenges of Mauritania's extractives-led model	Key drivers	Key policy reform areas	Corresponding pillars in the world bank group's strategic framework for private sector development and job creation
Low productivity growth, limiting labor returns	High market concentration	Generalizing the use of E-procurement Reducing tariff and non-tariff barriers to trade to that of peers Operationalizing the newly created competition authority	Creating a predictable regulatory environment
	Limited access to technology and limited technology adoption	Reducing tariff and non-tariff barriers to trade to that of peers Modernizing the payment system infrastructure	Creating a predictable regulatory environment Building a strong infrastructure foundation of physical, human, and natural capital
	Limited firm innovation capacities	Scaling-up investment in STEM Supporting skills development targeted at local needs	Fostering a dynamic private sector
Insufficient investment in non-extractive sectors	Limited firm-level competition and prevalence of non-tariff barriers, especially in the agricultural sector	Operationalizing the newly created competition authority Reducing tariff and non-tariff barriers to trade to that of peers	Creating a predictable regulatory environment
	Persistent asymmetries in asset ownership and access to credit.	Improving firms' access to finance Improving secured access to land	Fostering a dynamic private sector
	Inefficiencies in enforcing court decisions and lack of transparency	Strengthening the independence and integrity of the justice system Creating and operationalizing an independent agency to fight corruption	Creating a predictable regulatory environment
	Limited access to land and poor quality of land management	Improving secured access to land.	Creating a predictable regulatory environment
	Limited access to skilled labor	Supporting skills development targeted at local needs Updating the labor code Scaling-up investment in STEM Scaling-up investment in early childhood education	Fostering a dynamic private sector (1 and 3) Building a strong infrastructure foundation of physical, human, and natural capital (2 and 4)
	Outdated and inefficient labor market regulatory framework	Updating the labor code	Creating a predictable regulatory environment
Growth volatility, worsened by climate vulnerability	Limited fiscal space to invest in adaptation	Removing fossil fuel subsidies and introducing carbon taxation to fund adaptation investments	Building a strong infrastructure foundation of physical, human, and natural capital
	Inadequate urban planning	Operationalizing the new urban law and the newly created coastal observatory	Creating a predictable regulatory environment

Building a Strong Infrastructure Foundation. Reforms under this pillar aim at strengthening Mauritania's foundational infrastructure by modernizing the payment system infrastructure; building and protecting human capital; improving the functioning of the labor market; increasing female participation in the workforce and earnings; and empowering adolescent girls and young women; opening up fiscal space for climate adaptation and mitigation investments; and promoting sustainable management of the country's natural capital.

- **Modernize the payment system infrastructure** by implementing a Fast Payment System (FPS) allowing for interoperability between all financial market players, supporting the advent of new entrants and new business models, and accelerating the processing of transactions and the pace of innovation in the ecosystem.
- **Facilitating access to reliable and affordable broadband services for SMEs** through ongoing efforts (such as the World Bank project "Western Africa Regional Digital Integration Program," WARDIP) and partnerships with telecommunications providers and government initiatives to expand digital infrastructure.
- **Scaling-up investment in early childhood education**, including preschool programs, daycare centers and health and nutrition programs to build the skills for the future labor force and free up time that support the increase in female labor force participation.
- **Empowering adolescent girls and young women**, by improving their access to education through cash and in-kind transfers as well as to maternal and reproductive health services and addressing institutional barriers by strengthening the legislation on sexual harassment in employment and the dismissal of pregnant workers.
- **Generating the fiscal space needed to invest in adaptation and mitigation**, by strengthening the management of extractive revenues, including through the institutionalization of the fiscal anchor or the adoption of a fiscal rule combined with the reform of the Fonds National des Revenus de Hydrocarbures (FNRH). Increasing the fiscal space will also require enhancing tax revenues mobilization through adjusting excise taxes (tobacco, gasoline and diesel) to align with the cost of externalities, reducing VAT exemptions and improving the effectiveness of the personal income tax; implementing the fuel pricing reform; and introducing of a carbon tax to contain GHG emission and help finance adaptation.
- **Promoting sustainable management of natural capital**, by implementing the new Emergency Preparedness and Response (EP&R) regulatory framework and the new Urban Planning Law; the operationalization of the newly created coastal observatory. In the medium run, key focus areas for reform include the development of climate-smart agriculture; the decarbonization of the mining sector; and the gradual increase in the share of renewables in the energy generation mix.

Creating a Predictable Regulatory Environment. Reforms under this policy area aim to foster a level playing field for investments beyond the extractive sectors, by improving governance and strengthening institutions; reforming labor regulations; and enforcing competition policy and contracts. These reforms would also help boost formal business creation by reducing incentives to informality in labor and product markets.

- **Improving governance and strengthening institutions**, by creating and operationalizing an independent agency to fight corruption; strengthening the independence and integrity of the justice system; cracking down on informal payments; and strengthening fiscal transparency.
- **Improving the functioning of the labor market**, by proceeding to a comprehensive revision of the 2004 Labor Code to reflect the evolution of the labor market, simplify the hiring procedure and remove gender-discriminatory provisions. In the medium term, reforms should be geared towards reducing informality in the labor market and establishing a system for lifelong learning in partnership with the private sector and scale up apprenticeship.
- **Improving allocative efficiency**, through increased efficiency in public sector resource allocation, including efficient public procurement; improved project selection to ensure that public spending is directed toward high-impact areas and crowds-in private investment; and enhanced service delivery, including by providing government and citizens with a portfolio of digitized public services that help reduce transaction costs.
- **Enforcing competition policy and contracts**, by enforcing the new Competition Law, including through the operationalization of the competition authority; and reviewing the legal framework to clarify the types of suspensions of contract enforcement and increase predictability in the judicial system.

Fostering a Dynamic Private Sector. Policy reforms under this pillar aim to convert growth into local jobs through micro-level policies that directly enhance firms' ability to: absorb technology and innovate; boost their access to finance and land; and benefit from demand-driven skills development.

- **Facilitating technology transfer**, through lower tariff and non-tariff barriers to trade; investments in STEM (Science, Technology, Engineering, Mathematics) to build domestic innovation capabilities; and support to digital technology popularization and adoption programs. In the medium run, reforms in this area should focus on building an innovation ecosystem that encourages local R&D and transfer of knowledge from universities and public laboratories to domestic firms.
- **Improving firms' access to finance**, by establishing a well-functioning credit bureau and credit registry; improving the management of the SMEs Guarantee Fund through private sector participation; and developing Risk Sharing Facilities (RSF) that cover both Banks and SMEs.
- **Improving secured access to land**, by operationalizing a fully electronic land management information system; incentivizing land titling including through a period of free registration.
- **Supporting skills development targeted at local needs** by developing a national demand-driven skills training and certification system (TVET) in the formal and informal sector tailored to Mauritania's administrative and funding capacity.
- **Creating an enabling environment for innovation** by supporting research and development activities, which will help SMEs develop new products and services that leverage digital technologies. Ensure synergies and coordination with ongoing efforts under the Startup Act, Innovation Fund, and Ibtikar Hub.
- **Developing financial programs** that offer grants or low-interest loans to SMEs for investing in digital technologies, thereby reducing the financial burden of digital transformation and accelerating technology adoption. Complement these efforts with training programs focused on digital skills relevant to specific sectors to help SMEs integrate digital tools into their operations more effectively.
- **Encouraging SMEs to participate in regional digital markets and networks**, providing them with opportunities to collaborate with other businesses and access new regional markets.

Developing a robust fiscal framework for managing extractive revenues is a key complement to the proposed reforms in resource-dependent countries such as Mauritania. This involves accurately assessing the fiscal stance by focusing on the non-extractive primary balance; reducing the costs of resource revenue volatility through appropriate fiscal rules; optimizing intertemporal resource allocation for long-term sustainability; and managing the uncertainty of future extractive revenues. These approaches often involve setting up or strengthening special fiscal institutions, such as savings funds or sovereign wealth funds. Precautionary savings and financial buffers are also important policy goals to address the risk of fossil fuels becoming stranded assets.

B. Prioritizing Reforms and Estimating Their Output and Jobs Impacts

While all the above proposed reforms are critical, conducting a prioritization exercise is a necessary condition for successful program implementation, especially where capacity is low. The prioritization exercise reflects a qualitative assessment of the proposed policy reforms, drawing both on the diagnostic analysis conducted for this report and on contextual knowledge of Mauritania's situation. The prioritization criteria adopted in this report are discussed below. This process results in the qualitative assessment and ranking of policies detailed in Table 5.2.

- **Feasibility**, both in terms of implementation capacity and political economy factors and reflecting: (i) country ownership based on ongoing dialogue with authorities or alignment with the government's Strategy for Accelerated Growth and Shared Prosperity (SCAPP); and (ii) knowledge of the country's reform implementation capacity and track record of implementing similar policies.

Table 5.2: Policy prioritization process

	Growth and job impact	Leveraging	Feasibility	Value of the Prioritization measure	Policy relevance rank by pillar
Pillar 1: Building a strong infrastructure foundation of physical, human, and natural capital					
Scale-up investment in early childhood education	High	Moderate	High	High	1
Scale-up investment in maternal and reproductive health services for adolescent girls and young women	Low	Moderate	High	Moderate	
Establish a functional Labor Market Information System (LMIS)	High	Low	Moderate	Moderate	
Implementing a Fast Payment System (FPS) allowing for interoperability between all financial market players	Moderate	Low	Moderate	Moderate	
Remove fossil fuel subsidies and introduce carbon taxation to fund adaptation investments	Low	High	Moderate	Moderate	
Pillar 2: Creating a predictable regulatory environment					
Create and operationalize an anti-corruption agency	Moderate	Moderate	Moderate	Moderate	
Strengthening the independence and integrity of the justice system	Moderate	Moderate	Low	Moderate	
Mandate the electronic processing of all land transactions and incentivize land titling	High	High	High	High	1
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	High	High	Moderate	High	2
Generalize the use of E-procurement	Low	Low	High	Low	
Reduce tariff and non-tariff barriers to trade	Low	High	Low	Low	
Operationalize the newly created the competition authority	High	High	High	High	1
Operationalizing the new urban law and the newly created coastal observatory	Low	low	High	Low	
Eliminate gender gap in secondary and tertiary education through higher spending, cash and in-kind transfers	High	Moderate	Low	Moderate	
Pillar 3: Fostering a dynamic private sector					
Scale-up investment in STEM	High	High	High	High	1
Developing a national demand-driven skills training and certification system	High	Moderate	High	Moderate	
Establishing a well-functioning credit bureau and credit registry	Moderate	Moderate	Moderate	Moderate	
Improving the management of the SMEs guarantee fund by strengthening private sector participation	Moderate	Moderate	Moderate	Moderate	
Developing Risk Sharing Facilities (RSF) that cover both Banks and SMEs.	Moderate	Low	Moderate	Low	

- **Leveraging potential**, as reflected in each reform's ability to create complementarities and synergies, by generating spillover effects, providing a foundation or pre-conditions for subsequent reforms, or helping unlock otherwise infeasible reforms.
- **Growth and jobs impact**, as measured by the estimates of the impact of each policy on growth and jobs resulting from the simulations discussed below.

Applying the proposed prioritization criteria results in the selection of five policy reforms, representing all three pillars of the new growth framework:

- **Building a Strong Infrastructure Foundation:** Scale-up investment in early childhood education.
- **Creating a Predictable Regulatory Environment:** Mandate the electronic processing of all land transactions and incentivize land titling; update the labor code to simplify hiring procedure and remove gender-discriminatory provisions; operationalize the newly created competition authority.
- **Fostering a Dynamic Private Sector:** Scale-up investment in STEM and support technology adoption.

The proposed policy options can be organized according to their priority across different time frames, taking into account both immediate needs and long-term strategic goals. In the short term, the focus is on implementing policies that can enhance transparency and market dynamics, such as mandating electronic land transactions and operationalizing a competition authority. Medium-term priorities involve legislative changes and educational investments, including updating labor codes and scaling up STEM education, which require more time for stakeholder engagement and program development. Long-term priorities emphasize foundational investments in human capital, such as early childhood education whose investment can start immediately, but for which full benefits in terms of improved educational outcomes and economic productivity will be seen over a longer period. This approach aims to balance urgency with strategic foresight, ensuring that immediate actions contribute to long-term objectives.

The potential impact on growth and jobs—both quantity and quality—of the proposed reforms is considerable.

The analysis of the output and job impacts of policy reforms is conducted mainly using the MMod standalone model for Mauritania⁶⁹ and grounded on plausible assumptions that reflect validated impact estimates from the existing literature, logical consistency with established economic theories and a baseline which align with the historical demographic and labor market dynamics. Estimating the impact of policies on growth and jobs involves a multi-step approach. First, baseline projection using the MMod-GJ model establishes the economy's state before reforms, considering factors like demographics and labor market dynamics. Next, evidence from literature is used to provide key inputs to the MMod. Specifically, from the literature, we collect point estimates of the impact of each policy on either terms of trade, product markup, wage markup, total factor productivity (TFP), or labor force participation (LFP). These estimates are integrated into the model to simulate the economy-wide effects. Finally, the MMod compares policy outcomes to the baseline to evaluate macroeconomic effects on growth, employment, wage and labor productivity, enabling policymakers to develop targeted strategies for growth and job creation. Box 5.1 provides for selected policies an example of how the impact of policy recommendations is evaluated. A detailed presentation of the assumptions and empirical basis for each policy option is presented in Annex A5.1.

The magnitude of a policy's impact can vary significantly, influenced by several factors. The degree of implementation, reflecting the cost and effectiveness of execution, is crucial. Comprehensive implementation can amplify the impact, while partial efforts may result in smaller effects. Market frictions, such as rigidity and the balance between discretion and rule-based approaches, also play a role. Rigid markets may resist change, dampening the impact, whereas flexible markets can adapt more readily. Political economy factors, including alignment with political interests and support, affect implementation success and thus the impact. Additionally, the interplay of complementarity and substitutability among reforms influences outcomes; complementary reforms can create a synergistic effect, while substitutable ones may compete for resources, potentially diminishing effectiveness.

The simulations show that policy reforms have heterogeneous impacts on GDP, employment, real wages and labor productivity, both in terms of their magnitude and transmission channels. The operationalization of the new competition authority is projected to have the most significant impact on employment (see table 5.3 and table 5.4). Meanwhile, scaling-up investment in early childhood education is expected to yield the most substantial positive effects on GDP, real wages, and productivity.

69 The main assumptions behind the simulations are summarized in the annex.

Box 5.1: From policy options to impact

This box shows for selected policies how one moves from policy recommendations to the observed impact on growth and job.

Policy option 1: Operationalizing the newly created competition authority

Operationalizing the competition authority can significantly impact economic growth and job creation by addressing collusion among large firms and enhancing market competitiveness. Drawing on Edmond et al. (2015), we recognize that collusion can lead to artificially high markups, stifling innovation and limiting consumer choice. Edmond et al. (2015) found that by fostering higher competition through trade openness, markups can decrease by 6.3%, leading to more competitive pricing and increased consumer demand. We assume that the effects of such policy changes are not immediate; they unfold gradually, with only 33% of the adjustments occurring in the first year and the full impact taking up to nine years to materialize (European Commission, 2023). This gradual transition allows businesses to adapt to new competitive pressures, potentially leading to increased efficiency and productivity. As firms become more competitive, they may expand operations, invest in new technologies, and hire more workers, thereby contributing to job creation and economic growth.

Policy option 2: Update the labor code to simplify hiring procedures and removing gender-discriminatory provisions

We posit that the reform of the labor code will translate into increased total labor force participation in the long run by 0.67 percentage points, with 50 percent of the adjustment taking place in the first two years. Our assumption is based on two studies. The first study shows that introducing flexible hiring and firing procedures is projected to increase labor force participation (LFP) by 5.2 percent in a set of European countries (Di Tella and MacCulloch, 2005). The second study (Hyland et al. 2020) estimates that a one-point increase in the Women, Business and the Law WBL index is associated with an increase in female labor force participation of between 0.047 in the short run and 0.07 percent in the long run, in a sample of 190 countries.

Policy Simulation 1: Scaling-Up Investment in Early Childhood Education

Scaling up investment in human capital, particularly through early childhood education, can increase GDP and employment by 6.4 percent and 0.14 percent respectively by 2050, while significantly boosting real wages and labor productivity. The key transmissions channels for this reform work through female LFP in the short run and return to schooling in the long run. Early childhood education lays a strong foundation for cognitive and social development, equipping children with essential skills that enhance their future learning and productivity. By investing in quality early education, societies can reduce educational disparities, leading to a more skilled and capable workforce. This early investment yields high returns as it increases the likelihood of higher educational attainment and better job prospects in adulthood. Moreover, a well-educated workforce attracts businesses and fosters innovation, driving economic growth. Additionally, expanding early childhood education creates immediate job opportunities for educators and support staff, further stimulating the economy and potentially increasing LFP.

Policy Simulation 2: Mandating the Electronic Processing of All Land Transactions and Incentivizing Land Titling

Mandating the electronic processing of all land transactions and incentivizing land titling can improve growth and employment, with significant long-run effects on real wages and productivity. Secure land titles serve as collateral, reducing transaction costs, enabling formal credit access and higher investments. Electronic registries lower expropriation risks and informal payments, attracting more investments. Additionally, secure titles and efficient land markets enhance labor mobility and investment incentives, leading to better resource allocation and

Table 5.3: Growth and job impact of selected policy reforms

	Priority across time frame	Real GDP	Employment	Real wage	Labor productivity
Impact (% deviation from baseline)		2030			
Combined effect		3.08	2.65	1.78	1.66
	<i>Strong infrastructure foundation</i>				
Scale-up investment in early childhood education	Long-term	2.00	0.16	2.73	2.65
	<i>Predictable regulatory environment</i>				
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.13	0.01	0.07	0.06
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	0.57	1.47	-0.58	-0.63
Operationalize the newly created competition authority	Short-term	0.33	1.01	-0.51	-0.48
	<i>Dynamic private sector</i>				
Scale-up investment in STEM and support technology adoption	Medium-term	0.05	0.00	0.06	0.06
Impact (% deviation from baseline)		2040			
Combined effect		7.44	5.03	4.87	5.25
	<i>Strong infrastructure foundation</i>				
Scale-up investment in early childhood education	Long-term	4.84	0.19	6.51	6.47
	<i>Predictable regulatory environment</i>				
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.28	0.01	0.33	0.24
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	0.85	1.65	-0.47	-0.47
Operationalize the newly created competition authority	Short-term	1.36	3.18	-1.64	-1.13
	<i>Dynamic private sector</i>				
Scale-up investment in STEM and support technology adoption	Medium-term	0.10	0.00	0.14	0.14
Impact (% deviation from baseline)		2050			
Combined effect		10.33	6.86	6.61	8.38
	<i>Strong infrastructure foundation</i>				
Scale-up investment in early childhood education	Long-term	6.42	0.14	8.65	9.21
	<i>Predictable regulatory environment</i>				
Mandate the electronic processing of all land transactions and incentivize land titling	Short-term	0.41	0.01	0.56	0.44
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	Medium-term	1.04	1.85	-0.42	-0.31
Operationalize the newly created competition authority	Short-term	2.34	4.86	-2.34	-1.13
	<i>Dynamic private sector</i>				
Scale-up investment in STEM and support technology adoption	Medium-term	0.12	0.00	0.16	0.17

Source: Authors using MFMOD standalone.

Note: Short run estimates correspond to the year: 2025; Medium run: 2035; Long run: 2050.

Table 5.4: Projection table-baseline

	ST	MT	LT
	2025–2027	2028–2035	2036–2050
Real GDP, compound average annualized growth rate (%)	2.2	4.9	4.4
TFP (contribution, ppt)	0.2	1.5	0.5
Structural Employment (contribution, ppt)	1.0	1.0	1.0
Human Capital (contribution, ppt)	0.2	0.7	0.3
Physical Capital (contribution, ppt)	0.8	1.6	2.6
Demand Composition of Real GDP (share, %)			
Private Consumption	60.6	62.0	62.4
Government Consumption	15.9	16.4	15.9
Private Investment	19.9	20.8	22.2
Government Investment	10.0	9.6	9.0
Net Trade	–6.4	–8.7	–9.4
Sectoral composition of Real GDP (share, %)			
Agriculture	22.0	22.0	22.0
Industry	35.2	35.2	35.2
Services	42.8	42.8	42.8
Labor Markets			
Working Age Population ('000)	3,346.0	4,218.4	6,153.3
Labor Force Participation Rate	41.1	41.4	41.5
Male Labor Force Participation Rate	56.0	56.3	56.0
Female Labor Force Participation Rate	26.3	26.4	27.0
Employment ('000)	1,231.2	1,560.4	2,283.0
Labor Productivity (Index 1 = 2025)	1.0	1.2	1.7
Unemployment Rate (%)	10.7	10.6	10.6
Sectoral composition of employment (share, %)			
Agriculture	29.5	29.5	29.5
Industry	18.9	18.9	18.9
Services	51.7	51.7	51.7

Source: Authors' calculations based on the World Bank MMod standalone. Variables that are not growth rates or contributions reflect end-of-period levels.

economic growth. In rural areas, improved land management practices elevate agricultural productivity, creating more employment opportunities. According to Table 5.3, digitalizing land management and facilitating access to land titles by temporarily making them free of charge could increase GDP by 0.41 percent by 2050 compared to the baseline. The quality of employment, as measured by higher productivity, is expected to increase by 0.44 percent compared to the baseline.

Policy Simulation 3: Updating the Labor Code to Simplify Hiring Procedure and Remove Gender-Discriminatory Provisions

The revision of the Labor Code is projected to increase GDP by 1.04 percent and employment by 1.8 percent by 2050. The goal of this reform is to enhance labor productivity, economic growth, and job creation through flexible rules for hiring and firing, particularly for foreign workers. At the same time, it addresses gender discrimination and provides clear compensation guidelines for damages and losses in case of dismissal. Flexible hiring and firing

practices help businesses quickly adapt to market changes, allowing them to attract and retain skilled talent, including foreign workers, without excessive bureaucratic obstacles (Di Tella and MacCulloch, 2005). Addressing gender discrimination contributes to ensuring equal opportunities for all, promoting a diverse and inclusive workforce that can drive innovation and productivity. Clear compensation guidelines for dismissals offer security for employees, reducing concerns about unfair treatment and encouraging a more motivated workforce. This comprehensive strategy aims to create an efficient and fair labor market, which stimulates labor force participation, attracting a wide range of talents and supporting a competitive economy. Consequently, businesses are expected to benefit from this environment, leading to job creation and sustainable economic growth while ensuring equitable treatment of workers.

Policy Simulation 4: Operationalizing the Newly Created Competition Authority

Competition reform will have a sizeable effect on growth and job in the long run. A well-functioning competition authority will enforce the competition law by exacting penalties and sanction for non-compliance. This will reduce anticompetitive practices, leading to more dynamic markets, higher productivity, and innovation. Therefore, the key transmission channels at work here are lower mark-ups and higher TFP. This creates a level playing field that attracts both domestic and foreign investments, spurring economic growth and generating employment opportunities. Additionally, increased competition benefits consumers through lower prices and better-quality products, stimulating consumer spending and demand. Assuming a reduction in the product markup by 6.3 percent (Edmond et al. 2015) with a policy's full effect materializing over 9 years, the proposed reform will increase GDP by 2.4 percent and employment by 4.8 percent by 2050 and compared to the baseline. As wage markup also declines and converges with the productivity-consistent wage, firms face lower labor costs and are able to hire more workers at productivity levels.

Policy Simulation 5: Scaling-Up Investment in STEM and Supporting Technology Adoption

Scaling up investment in STEM and supporting technology adoption can significantly boost economic growth and job creation, with considerable positive effects on real wages and labor productivity. STEM fields produce skilled professionals who drive innovation and productivity growth across all sectors of the economy. Investing in STEM contributes to an innovation system that encourages local R&D and the transfer of knowledge from universities and public laboratories to domestic firms, thus raising TFP and lowering mark-ups. Such a system enhances the productivity and competitiveness of firms by enabling the development of new products and processes, resulting in increased labor demand and job creation. The simulations, which assume a gradual increase in Research and Development expenditure by 0.03 percent of GDP to match one-tenth of Vietnam's 2017 level—with 50 percent of the effect materializing within the first five years—predict a 0.12 percent increase in GDP, compared to the baseline. Additionally, the simulations indicate that the impact on real wages and labor productivity is more pronounced, particularly in the long term.

The Importance of Synergies and Complementarities

Synergies and complementarities across different types of policy actions also need to be taken into account to fully appreciate the impact of the proposed reforms. The simulations presented above are independent runs, meaning that they do not incorporate interactions between the different reforms. Therefore, the impact on key outcome variables of the aggregate policy package can only be fully captured when simulations are jointly considered. Table 5.3 also shows the combined effects of all five priority reforms, in the short, medium and long runs, reflecting a common impact channel working through TFP, LFP and mark-ups.

Developing a robust fiscal framework for managing extractive revenues as a complement to the proposed reforms is especially important for a resource-dependent country such as Mauritania. This involves accurately assessing the fiscal stance by focusing on the non-extractive primary balance; reducing the costs of resource revenue volatility through appropriate fiscal rules; optimizing intertemporal resource allocation for long-term sustainability;



and managing the uncertainty of future extractive revenues. These approaches often involve setting up special fiscal institutions not currently present in Mauritania, such as savings funds or sovereign wealth funds. Precautionary savings and financial buffers are also important policy goals to address the risk of fossil fuels becoming stranded assets.

Mauritania is on the verge of a transformative journey, aiming to become an Upper Middle-Income Country by 2050 through a well-sequenced and fully implemented reform program. This ambitious plan seeks to shift the nation's growth from an extractive-led growth toward a diversified economic model. By leveraging its extractive resources, Mauritania intends to invest in non-extractive, labor-intensive sectors like agriculture, tourism, fishing, and infrastructure. The reforms aim to develop skills and institutions to boost productivity and reduce economic volatility. Key reforms in land and competition will attract investments in agriculture and tourism, promoting economic diversification and enhancing growth and employment in the short to medium term. Additionally, investing in early childhood education and STEM will prepare the workforce with essential skills, fostering technological adoption crucial for productivity growth and structural transformation. Effective public finance management will expand fiscal space to address climate change and economic diversification, while safeguarding the budget and growth from commodity price fluctuations. The success of these reforms depends on the careful consideration of synergies, complementarities, and sequencing of policy actions. By implementing these changes, Mauritania will advance toward its long-term development vision, laying a strong foundation for sustainable economic growth and job creation.

REFERENCES

- Amin, M. and Okou, C. 2020. Casting a Shadow: Productivity of Formal Firms and Informality. *Review of Development Economics*. 2020; 24:1610–1630.
- ANSADE. 2017. Situation de l'Emploi et du Secteur Informel en Mauritanie.
- APIM. 2022. Investment Guide: Animal Production in Mauritania. *Agence de Promotion des Investissements*, 2022.
- Arnold, J. M. and Javorcik, B. S. 2009. Gifted Kids or Pushy Parents? Foreign Direct Investment and Plant Productivity in Indonesia. *Journal of International Economics*, 79 (1): 42–53.
- Bloom, N., Draca, M. and Van Reenen, J. 2016. Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity. *The review of economic studies*, 83(1), pp. 87–117.
- Blum, J. R., Datta, A., Fazekas, M., Samaddar, S. and Siddique, I. 2023. Introducing E-Procurement in Bangladesh: The Promise of Efficiency and Openness. *Policy Research Working Paper* (10390).
- Bu, D. and Liao, Y. 2022. Land property rights and rural enterprise growth: Evidence from land titling reform in China. *Journal of Development Economics*, 157, p. 102853.
- Caliendo, L., Parro, F. and Tsyvinski, A. 2022. Distortions and the structure of the world economy. *American Economic Journal: Macroeconomics*, 14(4), pp. 274–308.
- Constantinescu, C., Mattoo, A. and Ruta, M. 2019. Does vertical specialisation increase productivity?. *The World Economy*, 42(8), pp. 2385–2402.
- Djankov, S. and Hoekman, B. 2000. Foreign investment and productivity growth in Czech enterprises. *The World Bank Economic Review*, 14(1), pp. 49–64.
- Edmond, C., Midrigan, V. and Xu, D. Y. 2015. Competition, markups, and the gains from international trade. *American Economic Review*, 105(10), pp. 3183–3221.
- ENABEL. 2020. Réalisation d'un diagnostic filières et chaînes de valeur au sein des pôles de développement et identification des interventions potentielles en infrastructures rurales (CEC MIE005) pour le RIMDIR-Filières maraîchage et cultures de décrue Février 2020.
- Feenstra, R. and Kee, H. L. 2008. Export variety and country productivity: Estimating the monopolistic competition model with endogenous productivity. *Journal of international Economics*, 74(2), pp. 500–518.
- Fu, X., Mohnen, P. and Zanello, G. 2018. Innovation and productivity in formal and informal firms in Ghana. *Technological Forecasting and Social Change*, 131, pp. 315–325.
- Groh, M., Krishnan, N., McKenzie, D. and Vishwanath, T. 2016. Do wage subsidies provide a stepping-stone to employment for recent college graduates? Evidence from a randomized experiment in Jordan. *Review of Economics and Statistics*, 98(3), pp. 488–502.
- Hall, H. B. 2011. Innovation and Productivity. *Nordic Economic Policy Review*, Number 2/2011.
- Hsieh, C. T. and Klenow, P. J. 2009. Misallocation and manufacturing TFP in China and India. *The Quarterly journal of economics*, 124(4), pp. 1403–1448.
- Hyland, M., Djankov, S. and Goldberg, P. K. 2020. Gendered laws and women in the workforce. *American Economic Review: Insights*, 2(4), pp. 475–490.
- Islam, I. and Nazara, S. 2000. Estimating employment elasticity for the Indonesian economy. ILO Technical Note, Jakarta.
- Islam, R. 2004. The nexus of economic growth, employment and poverty reduction: An empirical analysis (Vol. 14). Geneva: Recovery and Reconstruction Department, International Labour Office.
- Islamic Republic of Mauritania. 2016. National Strategy for Accelerated Growth and Shared Prosperity 2016-2030. Nouakchott, Mauritania.
- Islamic Republic of Mauritania. 2017. National Survey on Employment and the Informal Sector in Mauritania. National Institute of Statistics. Nouakchott, Mauritania.

- Islamic Republic of Mauritania. 2023. Report on the implementation of the recommendations of the High Investment Council in Mauritania. Nouakchott, Mauritania.
- Krugman, P. 1980. Scale Economies, Product Differentiation and the pattern of Trade. *American Economic Review*, Vol 70: No 5, 950–959.
- Kubota, M and Zeufack, A. G. 2020. Assessing the Returns on Investment in Data Openness and Transparency. World Bank Policy Research Working Paper No 9139, Washington DC.
- Melitz, M. J. 2003. The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity. *Econometrica*. Vol 71. No 6: 1695–1725.
- OECD. 2005. Oslo Manuel: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, OECD Publishing.
- OECD. 2021. Public Procurement in the State of Mexico: Enhancing Efficiency and Competition. *OECD Public Governance Reviews*, OECD Publishing, Paris, <https://doi.org/10.1787/cc1da607-en>.
- Ohnsorge, F. and Yu, S. 2022. The Long Shadow of Informality: Challenges and Policies. Washington, DC: World Bank.
- Pouokam, N. 2021. Sharing Resource Wealth and Addressing Fragility. *How to Achieve Inclusive Growth*, pp. 674–704.
- Rahim, F., Benninger, T., Dubertret, J., and Ossowski, R. 2021. République Islamique de Mauritanie : Repenser la gestion des finances publiques et intégrer les ressources du secteur extractif. Washington, D.C.: Fiscal Affairs Department, International Monetary Fund.
- Saurav, A. and Kuo, R. 2020. A Literature Review on the Effects of FDI on Local Firms Productivity. In Focus-Finance, Competitiveness and Innovation. the World Bank. Washington DC.
- Van Biesebroeck, J. 2005. 'Firm Size Matters: Growth and Productivity growth in African Manufacturing. *Economic Development and Cultural Change*, Vol 53, Number 3.
- World Bank. 2014a. Contribution to the Improvement of land policy in Mauritania using the Land Governance Analysis Framework. Washington, DC: World Bank.
- World Bank. 2014b. Enterprise Survey in Mauritania. Washington, DC: World Bank.
- World Bank. 2020a. Doing Business report 2020. Washington, DC: World Bank.
- World Bank. 2020. Mauritania Country Economic Memorandum: Accelerating Growth through Diversification and Productive Cities. Washington DC, The World Bank Group.
- World Bank. 2020b. Policy Note on the Role of Competition Policy for a Diversified Economy. Washington, DC: World Bank.
- World Bank. 2021. Mauritania Public expenditure Review. The World Bank 2021, Washington.

ANNEXES Chapter 1

Annex 1.1: Summary of Projections

Table A.1.1: Summary of projections (baseline scenario)

	2015	2020	2025	2030	2035	2040	2045	2050
<i>Annual percentage change, unless indicated otherwise</i>								
Real Economy								
Real GDP at Market Price (LCU)	5.4	-0.4	4.9	5.0	5.5	5.9	6.3	6.4
Potential GDP	4.2	5.1	2.9	5.6	5.6	5.9	6.3	6.4
Output Gap	12.3	5.5	3.8	1.5	0.2	0.0	0.0	0.0
Sectoral output								
Agricultural output	10.3	-0.6	2.0	2.6	3.5	4.4	5.5	6.4
Industrial output	3.5	4.0	7.7	4.1	4.8	5.4	6.1	6.4
Service-sector output	5.0	-6.7	3.3	6.8	6.8	6.7	6.7	6.5
Factor supply								
TFP	0.5	1.2	1.3	1.1	1.5	1.8	2.0	2.1
Employment	2.2	2.9	3.7	3.1	2.9	2.7	2.5	2.3
Capital	2.8	2.2	2.0	3.1	3.4	4.3	5.1	5.7
Human Capital	1.0	0.8	0.8	3.6	2.4	1.2	0.6	0.1
Investment to GDP ratio	28.7	26.6	24.0	25.3	23.4	23.5	23.7	23.8
Government								
GG balance	-2.7	2.2	-1.4	0.1	0.1	0.1	0.1	0.1
Primary balance	-1.8	3.2	-0.5	0.9	0.9	0.8	0.8	0.7
GG Debt	59.9	56.5	44.8	45.1	41.8	39.1	36.6	34.5
External balance								
Current Account Balance	-15.5	-7.0	-6.1	-4.3	-4.3	-4.3	-4.3	-4.3

Source: MFMod LTGJ.

Table A.1.2: Summary of projections (ambitious scenario)

	2015	2020	2025	2030	2035	2040	2045	2050
<i>Annual percentage change, unless indicated otherwise</i>								
Real Economy								
Real GDP at Market Price (LCU)	5.4	-0.4	4.9	10.6	10.6	8.8	6.4	4.1
Potential GDP	4.2	5.1	4.2	11.3	10.7	8.8	6.4	4.1
Output Gap	12.3	5.5	2.9	1.5	0.2	0.0	0.0	0.0
Sectoral output								
Agricultural output	10.3	-0.6	2.0	10.6	10.6	8.8	6.4	4.1
Industrial output	3.5	4.0	7.7	10.6	10.6	8.8	6.4	4.1
Service-sector output	5.0	-6.7	3.3	10.6	10.6	8.8	6.4	4.1
Factor supply								
TFP	0.5	1.2	1.3	3.8	2.4	1.5	0.7	0.1
Employment	2.2	2.9	3.7	3.1	2.9	2.7	2.5	2.3

(continues)

Table A.1.2: Summary of projections (ambitious scenario) (Continued)

	2015	2020	2025	2030	2035	2040	2045	2050
Capital	2.8	2.2	2.0	7.7	9.9	8.7	6.8	4.7
Human Capital								
Investment to GDP ratio	28.7	26.6	24.0	34.7	37.2	34.2	30.2	25.8
Government								
GG balance	-2.7	2.2	-1.4	0.1	0.1	0.1	0.1	0.1
Primary balance	-1.8	3.2	-0.5	0.8	0.6	0.6	0.6	0.6
GG Debt	59.9	56.5	44.8	37.9	30.1	27.1	27.5	30.2
External balance								
Current Account Balance	-15.5	-7.0	-6.1	-4.3	-4.3	-4.3	-4.3	-4.3

Annex 1.2: Methodology for Selecting Mauritania's Peer Countries

This report follows a data-driven method, combined with judgment to identify countries that can serve as a basis for comparison and benchmarking with Mauritania. Two distinct groups—aspirational peers and structural peers—are selected based on specific criteria.

The aspirational peer group consists of countries that have demonstrated faster economic growth per capita than Mauritania since 2010, while exhibiting structural characteristics similar to Mauritania during the period 1990–2010. The two selection criteria are:

- Countries that had a GDP per capita, population, size of government, commodity export index within $\pm 30\%$ range of that of Mauritania during the benchmarking period 1990–2010.
- Countries that grew faster in per capita since 2010.

The choice of aspirational peers also reflects consultations with authorities during the preparation of this report.

The structural peer group is based on countries that share comparable economic characteristics with Mauritania during the 2015–2021 period. The key criteria for selection are:

- Countries are not landlocked and are located in Sub-Saharan Africa.
- GDP per capita, population size, government size, and commodity exports goods index fall within a $\pm 30\%$ range of Mauritania's values.

Annex 1.3: Calculating Employment Elasticities and Projecting Change in Employment

This note describes the methodology and data used to calculate the employment-growth elasticity in Mauritania. It is organized as following: (i) definition of the concept of elasticity, (ii) description of the data and sources, (iii) presentation of the methodology for calculating elasticity, and (iv) short analysis of the main results.

I. Definitions de concept

The employment-growth-elasticity ϵ measures the percentage change in employment ($\Delta L/L$) induced by a percentage change in GDP ($\Delta Y/Y$). It analyzes the sensibility of jobs to economic growth.

$$\epsilon = \frac{\Delta L/L}{\Delta Y/Y} \quad (1)$$

The note also includes sectorial employment-growth elasticities. For a given economic sector, the sectorial employment-growth elasticity is defined as the percentage change in employment in this sector induced by

the GDP of this sector. This is namely called a direct sectorial elasticity. The same consideration is also for sub sectorial employment-growth elasticity.

II. Data and sources

The calculation of the elasticity requires the availability of time series data both on growth and employment. Though comparable annual growth data are available for Mauritania, employment data are not produced on an annual basis. One possibility to fill this gap is to refer to the series of poverty and living conditions surveys (EPCV) and labor forces surveys which collect data on employment. The caveats with these sources are their incomparability. Even with the EPCVs the definition of the employment variables is quite similar, the differences in the periods of data collection within a year make difficult the comparison over time. Therefore, estimations of employment from the EPCVs (EPCV-2004, EPCV-2008, EPCV-2014 and EPCV-2019) and the LFS (ENESI-1992 and ENESI-2017) were tested but not considered when calculating the elasticities.

The alternative is to use the 2024 quarterly labor force survey, which contains a question that may be possible to estimate employment overtime. The question is as follows. How long have you been working in your main job? This question is used to reconstitute annual series data on employment by sector and gender. Among other limits of this approach, one can consider a risk of (i) overestimating employment overtime by not deducting the jobs lost (due to death, unemployment, international migration for example) and (ii) underestimating the employment because of the non-integration of the multi-activity. This methodology should be taken as a second-best solution.

III. Methodology

Two approaches can be considered once the time series data on growth data and employment are available: the arc-elasticity and the OLS regression.

a. Arc elasticity

The arc-elasticity consists of calculating the elasticity using the equation (1) above. The results presented in graph 1 confirms that the measure of the elasticity is instable and contains high variability.

a. OLS regression

One can easily demonstrates mathematically that the equation (2) is the equivalent of equation (1) when applying the logarithm to employment ($\ln L$) and to GDP ($\ln Y$). As a results, β_1 corresponds to the employment-growth elasticity. The OLS approach consists of estimating the coefficient β_1 using the OLS methodology. More specifically, similar regression is used to estimate the elasticity for each sectorial employment-growth. The dependent variable is the logarithm of the sectorial employment, and the explicative variables are the GDP by sector. Regarding the elasticities by gender, the regression is between the employment by sex with the overall GDP. Results are shown in table 2.

$$\ln L = \beta_0 + \beta_1 \ln Y \quad (2)$$

• Interpreting employment elasticities

The following table presents the different possible ways of interpreting employment elasticities.

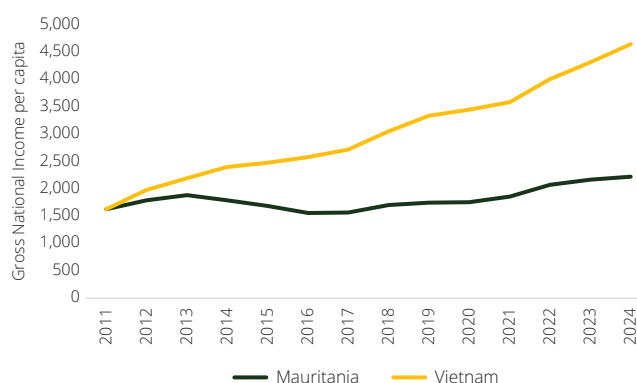
Employment elasticity	GDP growth	
	Positive GDP growth	Negative GDP growth
$\epsilon < 0$	(-) employment growth (+) productivity growth	(+) employment growth (-) productivity growth
$0 \leq \epsilon \leq 1$	(+) employment growth (+) productivity growth	(-) employment growth (-) productivity growth
$\epsilon > 1$	(+) employment growth (-) productivity growth	(-) employment growth (+) productivity growth

Annex 1.4: Unpacking the Divergence Between Mauritania and Vietnam

Box A.1.1: Unpacking the divergence between Mauritania and Vietnam

In 2011, Mauritania and Vietnam posted the same level of income per capita (US\$ 1630), but in 2023, Mauritania's income per capita only represented half of that of Vietnam. This strong divergence reflects a significant gap in almost all drivers of growth. As shown in Table A.1.3 below, human capital in Mauritania is low and the learning-adjusted years of schooling was less than half that of Vietnam in 2020. This mirrors an already significant gap in the number of years of schooling in 2010 (at the beginning of the divergence). Also, as was the case for countries that transitioned to UMIC status, investment in physical capital accumulation drove growth, but the striking difference between the two countries lies in the efficiency of government spending, which is significantly lower for Mauritania. Not only did Vietnam emphasize building and effectively using human capital, but it also focused its investment on labor intensive sectors such as manufacturing and agriculture, creating more productive jobs. Consequently, the share of wage and salaried workers in total employment rose from 34.6 percent in 2011 to 46.2 percent in 2022, while it followed the opposite way in Mauritania, decreasing from 43.6 percent in 2011 to 27 percent in 2022. Gaps in several areas of governance may also explain this striking divergence. In addition, Vietnam used its commitment to trade agreements, powered by stable and strong foreign direct investments to infuse new and foreign technologies in the country.

**Figure A.1.1: Mauritania vs Vietnam:
A divergence in one decade**



Source: World Bank World Development Indicator, 2023.

Table A.1.3: Human capital metrics in Mauritania vs Vietnam

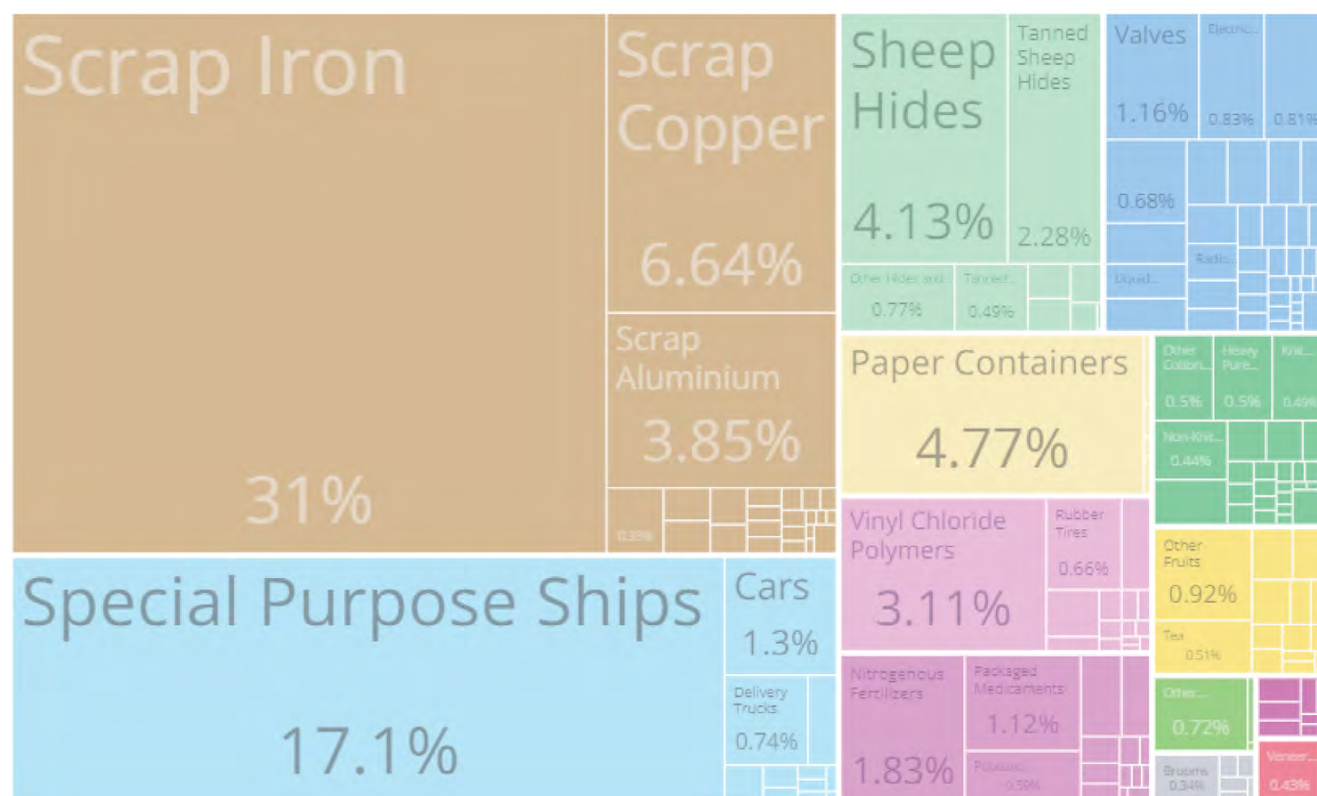
	Years of education [2010]	Human capital index [2020]	Learning-adjusted years of school [2020]	Gross fixed capital formation (% of GDP) [2000–2022]	Efficiency of government spending, [1–7], 2017	Wage and salaried workers (% of total employment), 2020	Government effectiveness [0–100]
Vietnam	7.2	0.7	10.6	31.0	3.3	46.21	59.43
Mauritania	4.5	0.4	4.2	34.6	2.5	27.0	25.47

Source: Prosperity Data 360, The World Bank.

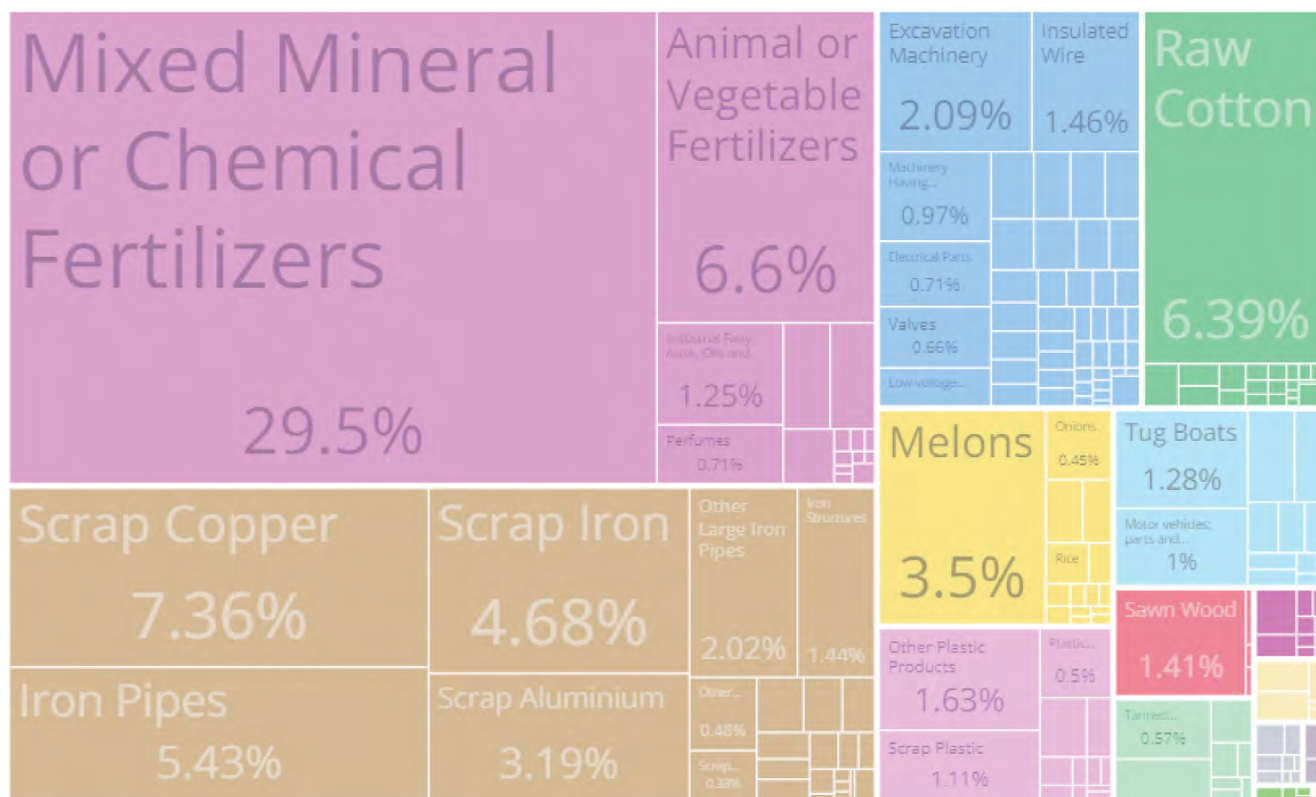
ANNEXES Chapter 3

Annex 3.1: Exports Excluding Extractives and Fisheries

Annex 3.1.a: Exports in 2012 (US\$75m) excluding extractives and fisheries



Annex 3.1.b: Exports in 2022 (US\$158m) excluding extractives and fisheries



Annex 3.2: The Greater Tortue Ahmeyim (GTA) LNG Project

Box A.3.1: The Greater Tortue Ahmeyim (GTA) LNG Project

The Greater Tortue Ahmeyim (GTA) LNG Project is a significant offshore gas development situated on the maritime boundary between Mauritania and Senegal. The project is structured in multiple phases, with the first phase reaching a Final Investment Decision (FID) in December 2018. However, it has experienced several delays. Initially, production was expected to start in 2022, but various factors have pushed this timeline. Key delays include technical and logistical challenges, global market conditions, and disruptions caused by the COVID-19 pandemic. These factors have collectively delayed the project's progress, with production now expected to commence in 2024. Mauritania's initial investment in this first phase is approximately \$307 million, potentially increasing to \$1 billion for all three phases if the country opts to acquire the maximum contractual share of 14%. The total investment for the entire project is estimated to be around \$4.8 billion. Over a 30-year period, the project is expected to generate gross aggregate revenues of approximately \$80 billion, with Mauritania's share of net revenues estimated at \$14.4 billion.

The GTA project can positively influence Mauritania's economy and significantly enhance the country's GDP providing essential fiscal stability contingent on effective revenue management and mitigation of risks associated with price fluctuations and other external factors. Mauritania is in fact projected to receive about 18% of the total revenues in the form of royalties, profit oil, income taxes, and dividends. However, the impact on the country's economy is highly sensitive to global oil and LNG price fluctuations, which could impact the actual financial outcomes underscoring the importance of stable and favorable market conditions for the project's success.

In terms of employment, the GTA project is expected to create numerous job opportunities, both directly and indirectly. The construction and operational phases will require a skilled workforce, potentially leading to the development of local talent and the establishment of training programs. Additionally, the project is expected to stimulate the local economy by increasing demand for goods and services, thereby creating jobs in various sectors. The involvement of the private sector is crucial to ensure that the benefits of the project are widely distributed and contribute to long-term economic growth and poverty reduction.

To maximize the benefits of the GTA project and ensure they contribute to long-term economic growth and poverty reduction, Mauritania can adopt several strategic measures. Establishing a robust framework for managing the revenues, such as a sovereign wealth fund, can ensure long-term investments. Investing in education and vocational training programs can develop a skilled workforce, while diversifying the economy can reduce vulnerability to global shocks. Infrastructure development and social programs can enhance the quality of life and support broader economic development. Strengthening institutional capacity to manage large-scale projects and revenues effectively is also essential. By adopting these measures, Mauritania can maximize the benefits of the GTA project, ensuring inclusive growth and sustainable development.

2024 Updates:

1. **Arrival of FPSO Vessel:** On June 4, 2024, the Floating Production, Storage, and Offloading (FPSO) vessel arrived safely at the GTA Phase 1 LNG development site, located offshore Mauritania and Senegal. This marks a significant milestone in the project's development.
2. **Arrival of FLNG Vessel:** In February 2024, the Floating Liquefied Natural Gas (FLNG) vessel, a core component of the GTA project, arrived at its destination. This vessel is crucial for the project's gas liquefaction process.
3. **Project Phases and Production Timeline:** GTA Phase 1 is the initial phase of the project, which involves producing gas from an ultra-deepwater subsea system and a mid-water floating production system. The project is expected to commence production in 2024, following the arrival and installation of the FPSO and FLNG vessels.

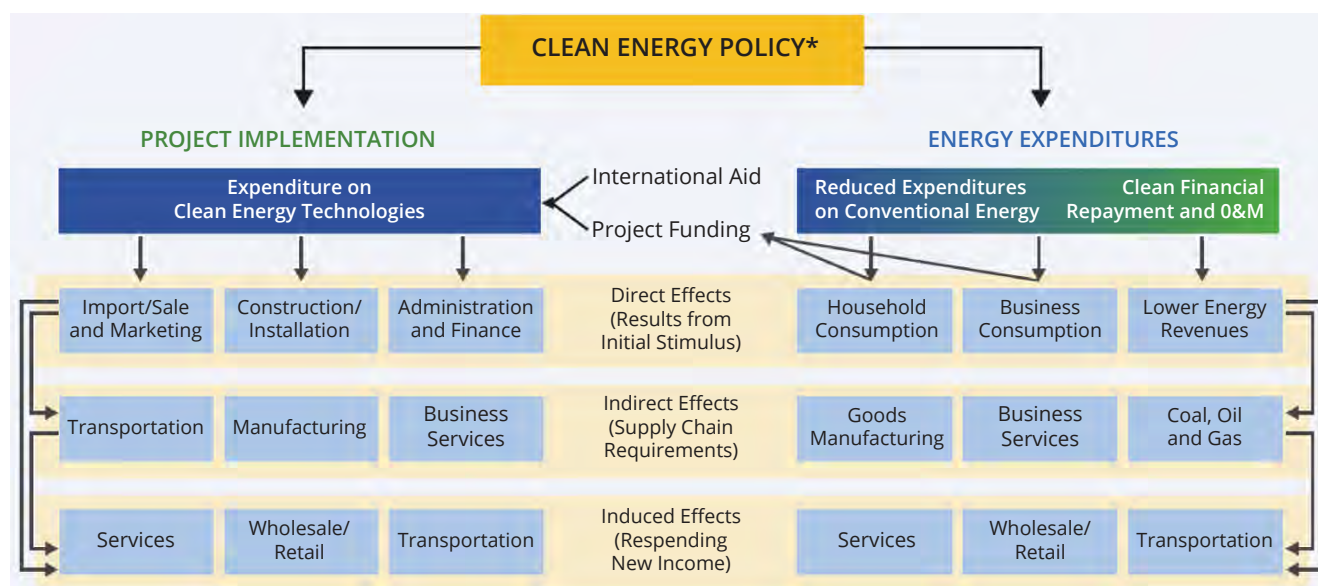
ANNEXES Chapter 4

Annex 4.1: The Clean Energy Employment Assessment Tool (CEEAT)

This tool uses an input-output (I-O) table-based approach in Microsoft Excel to estimate the economywide net direct, indirect, and induced employment impacts of different clean technology pathways, with a focus on the electricity sector. The tool implicitly compares clean energy investments with comparable investments in fossil fuels (counterfactual) and calculates the net job for each clean energy scenario. For each technology pathway, the tool models user-specified Renewable Energy capacity additions or energy savings from Energy Efficiency, and calculates the size of investments and expenditures in associated sectors. Based on the estimate local content of each sector, CEEAT then calculates the changes in final demand that results from these investments and expenditures, how they are financed, and their impacts on energy markets (changes in the costs and revenues faced by energy producers and consumers and other economic sectors)

CEEAT estimates the employment impact by tracking the flow of two different groups of expenditures when clean energy investments take place. The first group comprise one-time project implementation outlays such as the cost to bring a power plant online and including all activities required to design and construct the project during its initial implementation phases. The second group involves energy expenditures, which are the potential net electricity bill savings as result of the lower cost of renewable energy and energy efficiency technologies compared with conventional (fossil fuel) generation, after the plant is built and becomes operational. These include clean energy expenditures such as financial repayments and operation and maintenance through the life of a project. Figure provides a conceptual overview of how these two patterns of expenditure result in direct, indirect, and induced job effects in the economy.

Figure A.4.1: Expenditure flows as they generate direct, indirect, and induced effects



*With non-energy or multiple benefits creating a parallel set of effects beyond those highlighted here.

Source: World Bank.

CEEAT models the nets of those expenditures as a combination of four gross positive and negative impacts:

- **Investment impact:** Refers to the expenditures spent to set up the project (policy planning, financing, construction, installation, manufacturing, etc.). On the one hand, such project implementation expenditures can yield positive impacts due to the economic activity generated by investments in the sectors involved. On the

other hand, if the expenditures are financed by government budget, they require an increase in taxes levied on households and businesses, reducing the economic activities in those sectors, hence yielding negative impacts. The net investment impact is the sum of the two opposite impacts.

- **Investment shift impact:** Is the opposite of investment impact. The expenditures on clean energy technologies take away resources from future conventional fossil fuel energy projects, which negatively impact the associated sectors.
- **Substitution impact:** The result of energy expenditures saved by consumers through energy efficiency or the introduction of clean energy (if clean energy is cheaper than conventional energy). These savings are allocated to the three groups of consumers (residential, commercial, and industrial) depending on the customer structure of the economy. These consumers then spend in the economy to generate economic activities. In parallel the spending on operation and maintenance boosts the associated sector (for example services) but takes away resources from other sectors. Finally, throughout the project lifetime, the domestic loans incurred to pay for the project investment require interest payments, which result in positive activity in the finance sector. Again, the substitution impact is the sum of the three impacts and one negative impact.
- **Revenue impact:** Is the opposite of the substitution impact. Energy savings are beneficial for consumers but create a loss of income for the conventional energy provider.

Annex 4.2: Climate Analysis Methodological Note

To estimate the impact of climate shocks on human capital outcomes, we use data from the Climate Effects Analyzer Tool (CLIENT), developed by the World Bank Human Capital Project team. CLIENT integrates human capital data from publicly available sources, such as IPUMS censuses and DHS surveys, with satellite climate data from the Climate Change Knowledge Portal (CCKP). This allows us to analyze how climate shocks affect human capital outcomes. Through causal analysis, we focus on estimating the gendered impact of droughts. First, we identify drought-affected regions using the Standardized Precipitation Index (SPI), with a threshold of 2.5 standard deviations over a three-month period to define drought conditions. Among Mauritania's 44 departments, 17 were significantly affected by droughts between 2015 and 2020.

We then compare human capital outcomes in regions affected by droughts with those in non-affected regions, using the latter as counterfactuals. To conduct this analysis, the following specification is estimated.

$$y_{itj} = \beta_0 + \beta_1 (T_j Post_t) + \beta_2 Post_t + \delta_i + \theta_j + \varepsilon_{ijt}$$

where y_{itj} is the outcome of interest of individual i in region j at year t (for example, years of education), T_j is a dummy variable that takes value one if the individual resides in a district affected by the shock, $Post_t$ is a dummy variable that takes value one if the individual corresponds to the last DHS survey, δ_i are age fixed effects, θ_j are region fixed effects and ε_{ijt} is a random idiosyncratic error term. β_1 is the coefficient shown in the table, the DiD estimator that reflects the average impact of the shock for the treated individuals.

Table A.4.1: Drought impact on completed primary education (ages 25+) over groups

	Completed primary education (ages 25+)			
	Female	Male	Rural	Urban
Affected by drought	-0.141** (0.0420)	-0.120 (0.0758)	-0.0881*** (0.0112)	-0.0728* (0.0277)
Constant	0.250** (0.0555)	0.377*** (0.0537)	0.0491** (0.00900)	0.336*** (0.0148)
Observations	22,135	17,489	18,153	21,471

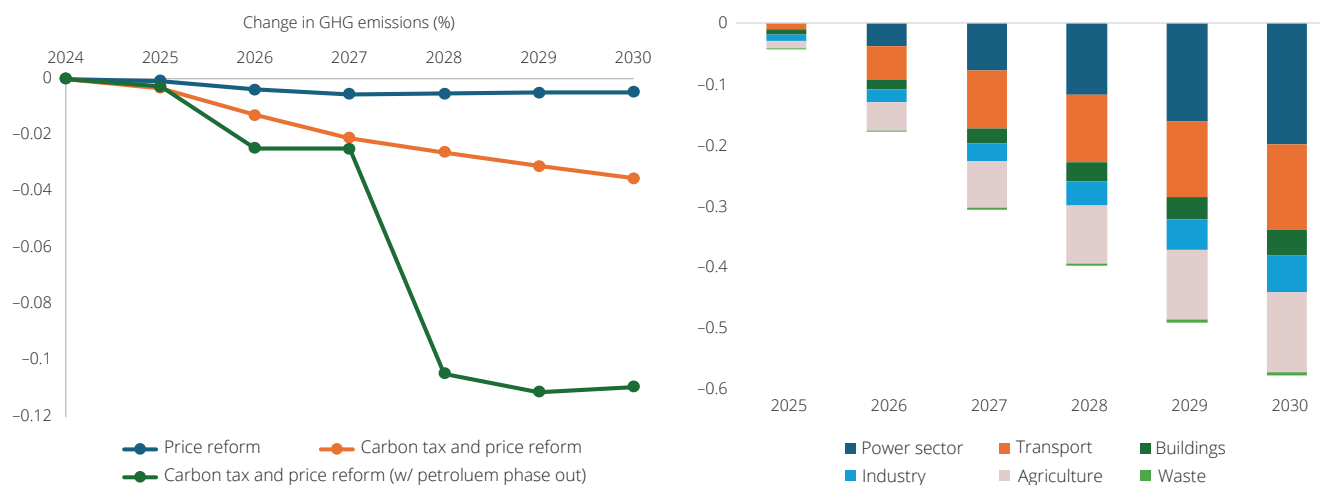
Table A.4.2: Drought impact on young women ages 20–24 giving birth between 15–18 over groups

	Young women ages 20–24 giving birth between 15–18	
	Rural	Urban
Affected by drought	0.0179*** (0.00211)	0.00407 (0.00262)
Constant	–0.0503*** (0.00349)	–0.0356*** (0.00305)
Observations	29,594	28,438

Table A4.3: Drought impact on mother alive over groups

	Mother is alive	
	Rural	Urban
Affected by drought	–0.00787** (0.00167)	–0.0141* (0.00548)
Constant	0.982*** (0.00599)	0.982*** (0.00233)
Observations	30,272	25,421

Figure A.4.2: Change in GHG emissions according to different policy scenarios⁷⁰



Source: CPAT.

⁷⁰ The underlying international oil price on which these projections are based are by the International Energy Agency and rises from around USD 77 in 2024 to USD 100 in 2030. This applies for Figure 2 to 6 unless otherwise specified. Left panel: Change in GHG emissions relative to the “current policies” scenario in percent. Right panel: Change in the emissions by sector for the “Carbon tax and price reform” relative to “Current policies” scenario in million tCO₂.

ANNEXES Chapter 5

Annex 5.1. From Policy to Impact

Selected policies	Impact channel	Point estimates	Assumptions/ paper findings	Literature
1. Scale-up investment in early childhood education	LFP	Total LFP: +5% (short to medium term, 5–10 years)	Our assumption is based on two studies. The first study examines the effects of empowering mothers and increasing early childhood investment on adult outcomes as well as children's cognitive and noncognitive skills (Lavy et al., 2022). It demonstrates that treated mothers are 16 percent more likely to be employed compared to untreated mothers. Assuming conservatively that 80% of women aged 15–49 are mothers (based on fertility rates and social norms), this translates to a 5 percent increase in labor force participation (LFP) over the short to medium term.	Lavy, V., Lotti, G., & Yan, Z. (2022). Empowering Mothers and Enhancing Early Childhood Investment: Effect on Adults' Outcomes and Children's Cognitive and Non-Cognitive Skills. DOI: 10.3368/jhr.57.3.0917-9083R2
2. Mandate the electronic processing of all land transactions and incentivize land titling	Agriculture interest rate spread	Reduce agriculture interest rate spread by 6.8 pp	Note that a 6.8 pp. Reduction in interest risk premia will have large macroeconomic effects given that $\text{Agr/GDP} = 20\%$	Deininger, K., & Goyal, A. (2010). <i>Going digital: Credit effects of land registry computerization in India</i> (Policy Research Working Paper No. 5244). The World Bank.
3. Update the labor code to simplify hiring procedures and remove gender-discriminatory provisions	LFP	Total LFP: +0.48% (short run), +0.67% (long run)	We posit that the reform of the labor code will translate into increased total labor force participation in the long run by 0.67 percentage points, with 50 percent of the adjustment taking place in the first two years. According to Hyland et al (2020), a one-point increase in the WBL index is associated with an increase in female labor force participation of between 0.047 and 0.053 percent. Considering the lagged effects, a one-point increase in the WBL index measured at a five-year lag is associated with an increase in female labor force participation of approximately 0.06 percentage points, which rises to approximately 0.07 after ten years. From the LR point estimate (0.07) we derive the change in total LFP = 0.67 percent.	Hyland, M., Djankov, S., & Goldberg, P. K. (2020). Gendered Laws and Women in the Workplace. <i>American Economic Review: Insights</i> , 2(4), 475–490.
4. Operationalize the newly created competition authority	Product Markup	Change in markup from higher competition: 6.3.	We build on Edmond et al (2015) and we assume some level of collusion between large firms. Change in markup from higher competition induced by trade openness is 6.3. The effects materialize slower, takes up to 9 years for policy's full effect (33% of the adjustments occurs in the first year)	Edmond et al. (2015). Competition, Markups, and the Gains from International Trade. <i>The American Economic Review</i> , 105(10), 3183–3221.

(continues)

Selected policies	Impact channel	Point estimates	Assumptions/ paper findings	Literature
5. Scale-up investment in STEM and support technology adoption	TFP	Increase in TFP by 0.1%	Investing in STEM and supporting technology adoption financed through increasing R&D spending by 0.03% of GDP, with 50% of benefits materializing in the first five years. A 1% increase in private-financed R&D raises TFP by 0.1% (meta-analysis of 45 studies).	Frontier Rate of Return to Investment in R&D. A report for the Department for Science, Innovation and Technology.
	Returns to schooling	In the LR (18-20 years) higher returns to schooling (12.4% a year)		

Annex 5.2. Extended Policy Simulations

	GDP (% deviation from baseline)		Employment (% deviation from baseline)	
	Short run	Long run	Short run	Long run
Reduce tariff and non-tariff barriers to trade	0.04	0.19	0.00	0.00
Scale-up investment in STEM and support technology adoption	0.24	5.37	0.07	0.09
Establish a functional Labor Market Information System (LMIS)	0.30	9.67	0.08	0.16
Adjust excise taxes (tobacco, gasoline and diesel) to align with the cost of externalities	-0.19	-0.42	0.00	0.00
Reduce VAT exemptions	-0.97	-2.13	0.00	-0.01
Improve the effectiveness of the personal income tax	-0.59	-0.43	-0.06	-0.71
Scale-up investment in early childhood education	0.56	6.42	0.16	0.14
Create and operationalize an anti-corruption agency	0.16	4.52	0.00	0.08
Generalize the use of E-procurement	0.13	8.66	0.04	0.30
Mandating fiscal transparency and accountability	0.29	0.74	0.02	0.01
Mandate the electronic processing of all land transactions and incentivize land titling	0.25	8.29	0.01	0.15
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	0.05	1.04	0.16	1.85
Operationalize the newly created the competition authority	0.02	2.34	0.08	4.86
Eliminate gender gap in secondary and tertiary education through higher spending, cash and in-kind transfers	0.03	3.89	0.09	6.91
Scale-up investment in maternal and reproductive health services for adolescent girls and young women	0.01	0.11	0.03	0.18
Addressing institutional barriers by strengthening the legislation on sexual harassment in employment and the dismissal of pregnant workers	0.18	2.29	0.55	4.14

	Wage (% deviation from baseline)		Productivity (% deviation from baseline)	
	Short run	Long run	Short run	Long run
Reduce tariff and non-tariff barriers to trade	0.19	0.35	0.00	0.32
Scale-up investment in STEM and support technology adoption	0.42	7.21	0.47	7.77
Establish a functional Labor Market Information System (LMIS)	0.53	12.98	0.59	13.91
Adjust excise taxes (tobacco, gasoline and diesel) to align with the cost of externalities	-0.37	-0.79	0.00	-0.35
Reduce VAT exemptions	-1.88	-3.97	0.00	-1.79
Improve the effectiveness of the personal income tax	0.13	0.20	0.04	0.48
Scale-up investment in early childhood education	1.00	8.65	1.12	9.21
Create and operationalize an anti-corruption agency	-0.02	6.05	0.00	4.71
Generalize the use of E-procurement	0.24	11.84	0.26	12.30
Mandating fiscal transparency and accountability	-0.41	1.11	-0.02	0.97
Mandate the electronic processing of all land transactions and incentivize land titling	-0.04	10.66	-0.01	8.13
Update the labor code to simplify hiring procedure and removing gender-discriminatory provisions	-0.05	-0.42	-0.08	-0.31
Operationalize the newly created the competition authority	-0.03	-2.34	-0.04	-1.13
Eliminate gender gap in secondary and tertiary education through higher spending, cash and in-kind transfers	-0.03	-1.50	-0.04	-1.11
Scale-up investment in maternal and reproductive health services for adolescent girls and young women	-0.01	-0.04	-0.01	-0.03
Addressing institutional barriers by strengthening the legislation on sexual harassment in employment and the dismissal of pregnant workers	-0.16	-0.96	-0.27	-0.74



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